SEQUENCE LISTING

<110> Genentech, Inc. Ashkenazi, Avi Botstein, David Desnoyers, Luc Eaton, Dan L. Ferrara, Napoleone Filvaroff, Ellen Fong, Sherman Gao, Wei-Qiang Gerber, Hanspeter Gerritsen, Mary E. Goddard, A. Godowski, Paul J. Grimaldi, Christopher J. Gurney, Austin L. Hillan, Kenneth, J. Kljavin, Ivar J. Mather, Jennie P. Pan, James Paoni, Nicholas F. Roy, Margaret Ann Stewart, Timothy A. Tumas, Daniel Williams, P. Mickey Wood, William, I.

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Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr
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Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg Arg Ile Ser Ala
50 55 60

Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu Ile Val Glu Thr Asp 65 70 75 80

Thr Phe Gly Ser Arg Val Arg Ile Lys Gly Ala Glu Ser Glu Lys Tyr 85 90 95

Ile Cys Met Asn Lys Arg Gly Lys Leu Ile Gly Lys Pro Ser Gly Lys
100 105 110

Ser Lys Asp Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr 115 120 125

Ala Phe Gln Asn Ala Arg His Glu Gly Trp Phe Met Ala Phe Thr Arg 130 135 140

Gln Gly Arg Pro Arg Gln Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu 145 150 155 160

Ala His Phe Ile Lys Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn 165 170 175

His Ala Glu Lys Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr
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Arg Arg Thr Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
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<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<400> 24

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atotgatcag gototatttg caggacaacc agataaacca cattcotttg acagcottot 1080
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gaagctacac gcctccaact cctaccacat cgaaacttcc cacgattcct gactgggatg 1500
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tgttacacag atgcatttgt gcatttgaat actctgtaat ttatacggtg tactatataa 2400
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<213> Homo sapiens
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Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
      50
                          55
Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
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Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala 115 120 125

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg

105

110

85

- Leu Ala Gln Leu Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser 130 135 140
- Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser 145 150 155 160
- Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val
- Gly Leu Pro Val Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile 180 185 190
- Ala Val Ile Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg 195 200 205
- Leu Ile Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly
- Thr Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn 225 230 235 240
- Ser Leu Ser His Pro Pro Pro Asp Leu Pro Gly Thr His Leu Ile Arg 245 250 255
- Leu Tyr Leu Gln Asp Asn Gln Ile Asn His Ile Pro Leu Thr Ala Phe 260 265 270
- Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn Asn Gln Leu 275 280 285
- Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser Asn Leu Lys Gln 290 295 300
- Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp Cys Ser Ile Lys Trp 305 310 315 320
- Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser Ser Leu Asn Val Arg Gly 325 330 335
- Phe Met Cys Gln Gly Pro Glu Gln Val Arg Gly Met Ala Val Arg Glu 340 345 350
- Leu Asn Met Asn Leu Leu Ser Cys Pro Thr Thr Thr Pro Gly Leu Pro 355 360 365
- Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser Pro Thr Thr Gln Pro Pro 370 375 380
- Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro 385 390 395 400
- Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg

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Asn	Asp	Thr 435	Ser	Ile	Gln	Val	Ser 440	Trp	Leu	Ser	Leu	Phe 445	Thr	Val	Met
Ala	Tyr 450	Lys	Leu	Thr	Trp	Val 455	Lys	Met	Gly	His	Ser 460	Leu	Val	Gly	Gly
Ile 465	Val	Gln	Glu	Arg	Ile 470	Val	Ser	Gly	Glu	Lys 475	Gln	His	Leu	Ser	Leu 480
Val	Asn	Leu	Glu	Pro 485	Arg	Ser	Thr	Tyr	Arg 490	Ile	Cys	Leu	Val	Pro 495	Leu
Asp	Ala	Phe	Asn 500	Tyr	Arg	Ala	Val	Glu 505	Asp	Thr	Ile	Cys	Ser 510	Glu	Ala
Thr	Thr	His 515	Ala	Ser	Tyr	Leu	Asn 520	Asn	Gly	Ser	Asn	Thr 525	Ala	Ser	Ser
His	Glu 530	Gln	Thr	Thr	Ser	His 535	Ser	Met	Gly	Ser	Pro 540	Phe	Leu	Leu	Ala
Gly 545	Leu	Ile	Gly	Gly	Ala 550	Val	Ile	Phe	Val	Leu 555	Val	Val	Leu	Leu	Ser 560
Val	Phe	Cys	Trp	His 565	Met	His	Lys	Lys	Gly 570	Arg	Tyr	Thr	Ser	Gln 575	Lys
Trp	Lys	Tyr	Asn 580	Arg	Gly	Arg	Arg	Lys 585	Asp	Asp	Tyr	Cys	Glu 590	Ala	Gly
Thr	Lys	Lys 595	Asp	Asn	Ser	Ile	Leu 600	Glu	Met	Thr	Glu	Thr 605	Ser	Phe	Gln
Ile	Val 610	Ser	Leu	Asn	Asn	Asp 615	Gln	Leu	Leu	Lys	Gly 620	Asp	Phe	Arg	Leu
Gln 625	Pro	Ile	Tyr	Thr	Pro 630	Asn	Gly	Gly	Ile	Asn 635	Tyr	Thr	Asp	Cys	His 640
Ile	Pro	Asn	Asn	Met 645	Arg	Tyr	Cys	Asn	Ser 650		Val	Pro	Asp	Leu 655	Glu
His	Cys	His	Thr 660												
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<212> PRT

<213> Homo sapiens

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Ser Arg Gly Arg His Ala Arg Thr His Pro Gln Thr Ala Leu Leu Glu 35 40 45

Ser Ser Cys Glu Asn Lys Arg Ala Asp Leu Val Phe Ile Ile Asp Ser 50 55 60

Ser Arg Ser Val Asn Thr His Asp Tyr Ala Lys Val Lys Glu Phe Ile 65 70 75 80

Val Asp Ile Leu Gln Phe Leu Asp Ile Gly Pro Asp Val Thr Arg Val 85 90 95

Gly Leu Leu Gln Tyr Gly Ser Thr Val Lys Asn Glu Phe Ser Leu Lys 100 105 110

Thr Phe Lys Arg Lys Ser Glu Val Glu Arg Ala Val Lys Arg Met Arg 115 120 125

His Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Ile Gln Tyr Ala Leu 130 135 140

Asn Ile Ala Phe Ser Glu Ala Glu Gly Ala Arg Pro Leu Arg Glu Asn 145 150 155 160

Val Pro Arg Val Ile Met Ile Val Thr Asp Gly Arg Pro Gln Asp Ser 165 170 175

Val Ala Glu Val Ala Ala Lys Ala Arg Asp Thr Gly Ile Leu Ile Phe 180 185 190

Ala Ile Gly Val Gly Gln Val Asp Phe Asn Thr Leu Lys Ser Ile Gly
195 200 205

Ser Glu Pro His Glu Asp His Val Phe Leu Val Ala Asn Phe Ser Gln 210 215 220

Ile Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His

225					230					235					240
Met	Cys	Ser	Thr	Leu 245	Glu	His	Asn	Cys	Ala 250	His	Phe	Cys	Ile	Asn 255	Ile
Pro	Gly	Ser	Tyr 260	Val	Cys	Arg	Cys	Lys 265	Gln	Gly	Tyr	Ile	Leu 270	Asn	Ser
Asp	Gln	Thr 275	Thr	Cys	Arg	Ile	Gln 280	Asp	Leu	Cys	Ala	Met 285	Glu	Asp	His
Asn	Cys 290	Glu	Gln	Leu	Cys	Val 295	Asn	Val	Pro	Gly	Ser 300	Phe	Val	Cys	Gln
Cys 305	Tyr	Ser	Gly	Tyr	Ala 310	Leu	Ala	Glu	Asp	Gly 315	Lys	Arg	Cys	Val	Ala 320
Val	Asp	Tyr	Cys	Ala 325	Ser	Glu	Asn	His	Gly 330	Cys	Glu	His	Glu	Cys 335	Val
Asn	Ala	Asp	Gly 340	Ser	Tyr	Leu	Cys	Gln 345	Cys	His	Glu	Gly	Phe 350	Ala	Leu
Asn	Pro	Asp 355	Glu	Lys	Thr	Cys	Thr 360	Arg	Ile	Asn	Tyr	Cys 365	Ala	Leu	Asn
Lys	Pro 370	Gly	Cys	Glu	His	Glu 375	Cys	Val	Asn	Met	Glu 380	Glu	Ser	Tyr	Tyr
Cys 385	Arg	Cys	His	Arg	Gly 390	Tyr	Thr	Leu	Asp	Pro 395	Asn	Gly	Lys	Thr	Cys 400
Ser	Arg	Val	Asp	His 405	Cys	Ala	Gln	Gln	Asp 410	His	Gly	Cys	Glu	Gln 415	Leu
Cys	Leu	Asn	Thr 420	Glu	Asp	Ser	Phe	Val 425	Cys	Gln	Суз	Ser	Glu 430	Gly	Phe
Leu	Ile	Asn 435	Glu	Asp	Leu	Lys	Thr 440	Cys	Ser	Arg	Val	Asp 445	Tyr	Cys	Leu
Leu	Ser 450	Asp	His	Gly	Cys	Glu 455	Tyr	Ser	Cys	Val	Asn 460	Met	Asp	Arg	Ser
Phe 465	Ala	Cys	Gln	Cys	Pro 470	Glu	Gly	His	Val	Leu 475	Arg	Ser	Asp	Gly	Lys 480
Thr	Cys	Ala	Lys	Leu 485	Asp	Ser	Cys	Ala	Leu 490	Gly	Asp	His	Gly	Cys 495	Glu
His	Ser	Cys	Val	Ser	Ser	Glu	Asp	Ser	Phe	Val	Cys	Gln	Cys	Phe	Glu

- Gly Tyr Ile Leu Arg Glu Asp Gly Lys Thr Cys Arg Arg Lys Asp Val 515 520 525
- Cys Gln Ala Ile Asp His Gly Cys Glu His Ile Cys Val Asn Ser Asp 530 535 540
- Asp Ser Tyr Thr Cys Glu Cys Leu Glu Gly Phe Arg Leu Ala Glu Asp 545 550 555 560
- Gly Lys Arg Cys Arg Arg Lys Asp Val Cys Lys Ser Thr His His Gly
 565 570 575
- Cys Glu His Ile Cys Val Asn Asn Gly Asn Ser Tyr Ile Cys Lys Cys 580 585 590
- Ser Glu Gly Phe Val Leu Ala Glu Asp Gly Arg Arg Cys Lys Lys Cys 595 600 605
- Thr Glu Gly Pro Ile Asp Leu Val Phe Val Ile Asp Gly Ser Lys Ser 610 620
- Leu Gly Glu Glu Asn Phe Glu Val Val Lys Gln Phe Val Thr Gly Ile 625 630 635 640
- Ile Asp Ser Leu Thr Ile Ser Pro Lys Ala Ala Arg Val Gly Leu Leu 645 650 655
- Gln Tyr Ser Thr Gln Val His Thr Glu Phe Thr Leu Arg Asn Phe Asn 660 665 670
- Ser Ala Lys Asp Met Lys Lys Ala Val Ala His Met Lys Tyr Met Gly 675 680 685
- Lys Gly Ser Met Thr Gly Leu Ala Leu Lys His Met Phe Glu Arg Ser 690 695 700
- Phe Thr Gln Gly Glu Gly Ala Arg Pro Leu Ser Thr Arg Val Pro Arg 705 710 715 720
- Ala Ala Ile Val Phe Thr Asp Gly Arg Ala Gln Asp Asp Val Ser Glu 725 730 735
- Trp Ala Ser Lys Ala Lys Ala Asn Gly Ile Thr Met Tyr Ala Val Gly
 740 745 750
- Val Gly Lys Ala Ile Glu Glu Glu Leu Gln Glu Ile Ala Ser Glu Pro 755 760 765
- Thr Asn Lys His Leu Phe Tyr Ala Glu Asp Phe Ser Thr Met Asp Glu 770 780
- Ile Ser Glu Lys Leu Lys Lys Gly Ile Cys Glu Ala Leu Glu Asp Ser 785 790 795 800

Asp	Gly	Arg	Gln	Asp 805	Ser	Pro	Ala	Gly	Glu 810	Leu	Pro	Lys	Thr	Val 815	Gln	
Gln	Pro	Thr	Glu 820	Ser	Glu	Pro	Val	Thr 825	Ile	Asn	Ile	Gln	Asp 830	Leu	Leu	
Ser	Cys	Ser 835	Asn	Phe	Ala	Val	Gln 840	His	Arg	Tyr	Leu	Phe 845	Glu	Glu	Asp	
Asn	Leu 850	Leu	Arg	Ser	Thr	Gln 855	Lys	Leu	Ser	His	Ser 860	Thr	Lys	Pro	Ser	
Gly 865	Ser	Pro	Leu	Glu	Glu 870	Lys	His	Asp	Gln	Cys 875	Lys	Cys	Glu	Asn	Leu 880	
Ile	Met	Phe	Gln	Asn 885	Leu	Ala	Asn	Glu	Glu 890	Val	Arg	Lys	Leu	Thr 895	Gln	
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Arg	Tyr	Arg 915														
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Val	Leu 50	Pro	Ala	Trp	Tyr	Thr 55	Leu	His	Gly	Glu	Val 60	Ser	Ser	Ser	Gln
Pro 65	Trp	Glu	Val	Pro	Phe 70	Val	Met	Trp	Phe	Phe 75	Lys	Gln	Lys	Glu	Lys 80
Glu	Asp	Gln	Val	Leu 85	Ser	Tyr	Ile	Asn	Gly 90	Val	Thr	Thr	Ser	Lys 95	Pro
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Leu 145	Glu	Leu	Asn	Val	Leu 150	Val	Pro	Pro	Ala	Pro 155	Pro	Ser	Cys	Arg	Leu 160
Gln	Gly	Val	Pro	His 165	Val	Gly	Ala	Asn	Val 170	Thr	Leu	Ser	Cys	Gln 175	Ser
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Lys 225	Ala	His	Asn	Glu	Val 230	Gly	Thr	Ala	Gln	Cys 235	Asn	Val	Thr	Leu	Gli 240
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Thr	Leu	Val	Gly 260	Leu	Gly	Leu	Leu	Ala 265	Gly	Leu	Val	Leu	Leu 270	Tyr	His
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Ser 305	Lys	Asn	Gly	Thr	Leu 310	Ser	Ser	Val	Thr	Ser 315	Ala	Arg	Ala	Leu	Arg 320	
Pro	Pro	His	Gly	Pro 325	Pro	Arg	Pro	Gly	Ala 330	Leu	Thr	Pro	Thr	Pro 335	Ser	
Leu	Ser	Ser	Gln 340	Ala	Leu	Pro	Ser	Pro 345	Arg	Leu	Pro	Thr	Thr 350	Asp	Gly	
Ala	His	Pro 355	Gln	Pro	Ile	Ser	Pro 360	Ile	Pro	Gly	Gly	Val 365	Ser	Ser	Ser	
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<213> Homo sapiens
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qtqaaatacq caatggaatt gaagcctgct attgcaacat gggattttca ggaaatggtg 180
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caaactgcca tttagataat gtctgtatag ctgcaaatat taataaaact ttaacaaaaa 420
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<213> Homo sapiens

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Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn Glu Cys Gly Asn 50 55 60

Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys Thr Asn Thr Glu Gly 65 70 75 80

Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe Arg Ser Ser Ser Asn Gln 85 90 95

Asp Arg Phe Ile Thr Asn Asp Gly Thr Val Cys Ile Glu Asn Val Asn 100 105 110

Ala Asn Cys His Leu Asp Asn Val Cys Ile Ala Ala Asn Ile Asn Lys
115 120 125

Thr Leu Thr Lys Ile Arg Ser Ile Lys Glu Pro Val Ala Leu Leu Gln 130 135 140

Glu Val Tyr Arg Asn Ser Val Thr Asp Leu Ser Pro Thr Asp Ile Ile 145 150 155 160

Thr Tyr Ile Glu Ile Leu Ala Glu Ser Ser Ser Leu Leu Gly Tyr Lys 165 170 175

Asn Asn Thr Ile Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr

Glu Phe Val Lys Thr Val Asn Asn Phe Val Gln Arg Asp Thr Phe Val Val Trp Asp Lys Leu Ser Val Asn His Arg Arg Thr His Leu Thr Lys Leu Met His Thr Val Glu Gln Ala Thr Leu Arg Ile Ser Gln Ser Phe Gln Lys Thr Thr Glu Phe Asp Thr Asn Ser Thr Asp Ile Ala Leu Lys Val Phe Phe Asp Ser Tyr Asn Met Lys His Ile His Pro His Met Asn Met Asp Gly Asp Tyr Ile Asn Ile Phe Pro Lys Arg Lys Ala Ala Tyr Asp Ser Asn Gly Asn Val Ala Val Ala Phe Leu Tyr Tyr Lys Ser Ile Gly Pro Leu Leu Ser Ser Ser Asp Asn Phe Leu Leu Lys Pro Gln Asn Tyr Asp Asn Ser Glu Glu Glu Glu Arg Val Ile Ser Ser Val Ile Ser Val Ser Met Ser Ser Asn Pro Pro Thr Leu Tyr Glu Leu Glu Lys Ile Thr Phe Thr Leu Ser His Arg Lys Val Thr Asp Arg Tyr Arg Ser Leu Cys Ala Phe Trp Asn Tyr Ser Pro Asp Thr Met Asn Gly Ser Trp Ser Ser Glu Gly Cys Glu Leu Thr Tyr Ser Asn Glu Thr His Thr Ser Cys Arg Cys Asn His Leu Thr His Phe Ala Ile Leu Met Ser Ser Gly Pro Ser Ile Gly Ile Lys Asp Tyr Asn Ile Leu Thr Arg Ile Thr Gln Leu Gly Ile Ile Ser Leu Ile Cys Leu Ala Ile Cys Ile Phe Thr Phe Trp Phe Phe Ser Glu Ile Gln Ser Thr Arg Thr Thr Ile His Lys

Asn Leu Cys Cys Ser Leu Phe Leu Ala Glu Leu Val Phe Leu Val Gly 465 470 475 480

Ile Asn Thr Asn Thr Asn Lys Leu Phe Cys Ser Ile Ile Ala Gly Leu 485 490 495

Leu His Tyr Phe Phe Leu Ala Ala Phe Ala Trp Met Cys Ile Glu Gly 500 505 510

Ile His Leu Tyr Leu Ile Val Val Gly Val Ile Tyr Asn Lys Gly Phe 515 520 525

Leu His Lys Asn Phe Tyr Ile Phe Gly Tyr Leu Ser Pro Ala Val Val 530 535 540

Val Gly Phe Ser Ala Ala Leu Gly Tyr Arg Tyr Tyr Gly Thr Thr Lys 545 550 555 560

Val Cys Trp Leu Ser Thr Glu Asn Asn Phe Ile Trp Ser Phe Ile Gly 565 570 575

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Ile Tyr Lys Val Phe Arg His Thr Ala Gly Leu Lys Pro Glu Val Ser 595 600 605

Cys Phe Glu Asn Ile Arg Ser Cys Ala Arg Gly Ala Leu Ala Leu Leu 610 620

Phe Leu Leu Gly Thr Thr Trp Ile Phe Gly Val Leu His Val Val His 625 630 635 640

Ala Ser Val Val Thr Ala Tyr Leu Phe Thr Val Ser Asn Ala Phe Gln 645 650 655

Gly Met Phe Ile Phe Leu Phe Leu Cys Val Leu Ser Arg Lys Ile Gln 660 665 670

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- Thr Cys Ile Ala Asp Glu Ile Gly Ala Arg Trp Asp Lys Leu Ser Gly 225 230 235 240
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- Arg Pro Pro Ala Thr Ala Thr Ser Pro Val Pro Gln Arg Thr Trp Pro 305 310 315 320
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- Gly Leu Lys Pro Thr Val Ala Leu Cys Gln Gln Lys Cys Arg Arg Thr 290 295 300
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- Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln 210 215 220
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teggatgtgt tittaataat gicagetatg igeeceatee teeticatge eeteecteec 1140
tttcctacca ctgctgagtg gcctggaact tgtttaaaagt gtttattccc catttctttg 1200
agggatcagg aaggaateet gggtatgeea ttgaetteee ttetaagtag acageaaaaa 1260
tggcgggggt cgcaggaatc tgcactcaac tgcccacctg gctggcaggg atctttgaat 1320
aggtatettg agettggtte tgggetettt cettgtgtae tgacgaecag ggecagetgt 1380
tctagagcgg gaattagagg ctagagcggc tgaaatggtt gtttggtgat gacactgggg 1440
teetteeate tetggggeee actetettet gtetteecat gggaagtgee actgggatee 1500
ctctgccctg tcctcctgaa tacaagctga ctgacattga ctgtgtctgt ggaaaatggg 1560
agctettgtt gtggagagca tagtaaattt teagagaact tgaageeaaa aggatttaaa 1620
acceptete taaagaaaag aaaactegag geteggegea gteggeteaeg eetegtaatee 1680
cagaggetga ggcaggegga teacetgagg tegggagtte gggateagee tgaceaacat 1740
ggagaaaccc tactggaaat acaaagttag ccaggcatgg tggtgcatgc ctgtagtccc 1800
agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa aaaaaaa
<210> 119
<211> 299
<212> PRT
<213> Homo sapiens
<400> 119
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Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His
                                                     30
             20
                                 25
Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
     50
                         55
                                             60
Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
 65
                     70
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Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe

Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser 100 105 110

Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val 115 120 125

Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr 130 135 140

Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro 145 150 155 160

Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn 165 170 175

Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro 180 185 190

Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly 195 200 205

Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser 210 215 220

Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val 225 230 235 240

Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly 245 250 255

Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly 260 265 270

Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala Arg Ser Glu 275 280 285

Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val

<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 120

tcgcggagct gtgttctgtt tccc

<210> 121

<211> 50

<212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe	
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<210> 122 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe	
<400> 122 acacctggtt caaagatggg	20
<210> 123 <211> 24 <212> DNA <213> Artificial Sequence	
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<400> 123 taggaagagt tgctgaaggc acgg	24
<210> 124 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Synthetic oligonucleotide probe	
<400> 124 ttgccttact caggtgctac	20
<210> 125 <211> 20 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Synthetic	

oligonucleotide probe

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<400> 125
                                                                  20
actcagcagt ggtaggaaag
<210> 126
<211> 1210
<212> DNA
<213> Homo sapiens
<400> 126
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gagcgtggcg aacaggggct ctgggcctgg cgctgctgct gctgctcggc ctcggactag 120
geetggagge egeegegage eegettteea eecegacete tgeecaggee geaggeecea 180
getcaggetc gtgcccaccc accaagttcc agtgccgcac cagtggctta tgcgtgcccc 240
tcacctggcg ctgcgacagg gacttggact gcagcgatgg cagcgatgag gaggagtgca 300
ggattgagcc atgtacccag aaagggcaat gcccaccgcc ccctggcctc ccctgcccct 360
gcaccggcgt cagtgactgc tctgggggaa ctgacaagaa actgcgcaac tgcagccgcc 420
tggcctgcct agcaggcgag ctccgttgca cgctgagcga tgactgcatt ccactcacgt 480
ggcgctgcga cggccaccca gactgtcccg actccagcga cgagctcggc tgtggaacca 540
atgagatect eceggaaggg gatgecacaa ceatggggee eeetgtgaee etggagagtg 600
teacetetet caggaatgee acaaceatgg ggeeceetgt gaeeetggag agtgteecet 660
ctgtcgggaa tgccacatcc tcctctgccg gagaccagtc tggaagccca actgcctatg 720
gggttattgc agctgctgcg gtgctcagtg caagcctggt caccgccacc ctcctccttt 780
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ccgtcactca gccctgggcg tagccggaca ggaggagagc agtgatgcgg atgggtaccc 960
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teetgeagaa gtggeeetgg agattgaggg teeetggaca eteeetatgg agateegggg 1080
agetaggatg gggaacetge cacagecaga actgagggge tggececagg cageteccag 1140
ggggtagaac ggccctgtgc ttaagacact ccctgctgcc ccgtctgagg gtggcgatta 1200
                                                                   1210
aagttgcttc
<210> 127
<211> 282
<212> PRT
<213> Homo sapiens
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Leu Gly Leu Ala Leu Leu Leu Leu Gly Leu Gly Leu Glu
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                                  25
Ala Ala Ala Ser Pro Leu Ser Thr Pro Thr Ser Ala Gln Ala Ala Gly
                              40
          35
Pro Ser Ser Gly Ser Cys Pro Pro Thr Lys Phe Gln Cys Arg Thr Ser
Gly Leu Cys Val Pro Leu Thr Trp Arg Cys Asp Arg Asp Leu Asp Cys
                                                              80
                                          75
  65
                      70
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Ser Asp Gly Ser Asp Glu Glu Glu Cys Arg Ile Glu Pro Cys Thr Gln 85 90 95

Lys Gly Gln Cys Pro Pro Pro Pro Gly Leu Pro Cys Pro Cys Thr Gly 100 105 110

Val Ser Asp Cys Ser Gly Gly Thr Asp Lys Lys Leu Arg Asn Cys Ser 115 120 125

Arg Leu Ala Cys Leu Ala Gly Glu Leu Arg Cys Thr Leu Ser Asp Asp 130 135 140

Cys Ile Pro Leu Thr Trp Arg Cys Asp Gly His Pro Asp Cys Pro Asp 145 150 155 160

Ser Ser Asp Glu Leu Gly Cys Gly Thr Asn Glu Ile Leu Pro Glu Gly 165 170 175

Asp Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val Thr Ser 180 185 190

Leu Arg Asn Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val
195 200 205

Pro Ser Val Gly Asn Ala Thr Ser Ser Ser Ala Gly Asp Gln Ser Gly 210 215 220

Ser Pro Thr Ala Tyr Gly Val Ile Ala Ala Ala Ala Val Leu Ser Ala 225 230 235 240

Ser Leu Val Thr Ala Thr Leu Leu Leu Leu Ser Trp Leu Arg Ala Gln 245 250 255

Glu Arg Leu Arg Pro Leu Gly Leu Leu Val Ala Met Lys Glu Ser Leu 260 265 270

Leu Leu Ser Glu Gln Lys Thr Ser Leu Pro 275 280

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 oligonucleotide probe

<400> 128

aagttccagt gccgcaccag tggc

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<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 129
                                                                  24
ttggttccac agccgagctc gtcg
<210> 130
<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 130
gaggaggagt gcaggattga gccatgtacc cagaaagggc aatgcccacc
                                                                   50
<210> 131
<211> 1843
<212> DNA
<213> Homo sapiens
<220>
<221> modified base
<222> (1837)
<223> a, t, c or g
<400> 131
cccacgcgtc cggtctcgct cgctcgcgca gcggcggcag cagaggtcgc gcacagatgc 60
gggttagact ggcggggga ggaggcggag gagggaagga agctgcatgc atgagaccca 120
cagactettg caagetggat geeetetgtg gatgaaagat gtateatgga atgaaceega 180
gcaatggaga tggatttcta gagcagcagc agcagcagca gcaacctcag tccccccaga 240
gactettggc cgtgatectg tggtttcage tggcgctgtg ettcggccct gcacagetca 300
cgggcgggtt cgatgacctt caagtgtgtg ctgaccccgg cattcccgag aatggcttca 360
ggacccccag cggagggtt ttctttgaag gctctgtagc ccgatttcac tgccaagacg 420
gattcaagct gaagggcgct acaaagagac tgtgtttgaa gcattttaat ggaaccctag 480
gctggatccc aagtgataat tccatctgtg tgcaagaaga ttgccgtatc cctcaaatcg 540
aagatgctga gattcataac aagacatata gacatggaga gaagctaatc atcacttgtc 600
atgaaggatt caagatccgg taccccgacc tacacaatat ggtttcatta tgtcgcgatg 660
atggaacgtg gaataatctg cccatctgtc aaggctgcct gagacctcta gcctcttcta 720
atggctatgt aaacatctct gagctccaga cctccttccc ggtggggact gtgatctcct 780
ategetgett teeeggattt aaacttgatg ggtetgegta tettgagtge ttacaaaace 840
ttatctggtc gtccagccca ccccggtgcc ttgctctgga agcccaagtc tgtccactac 900
ctccaatggt gagtcacgga gatttcgtct gccacccgcg gccttgtgag cgctacaacc 960
acggaactgt ggtggagttt tactgcgatc ctggctacag cctcaccagc gactacaagt 1020
acatcacctg ccagtatgga gagtggtttc cttcttatca agtctactgc atcaaatcag 1080
agcaaacgtg gcccagcacc catgagaccc tcctgaccac gtggaagatt gtggcgttca 1140
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cggcaaccag tgtgctgctg gtgctgctgc tcgtcatcct ggccaggatg ttccagacca 1200
agttcaaggc ccactttccc cccagggggc ctccccggag ttccagcagt gaccctgact 1260
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ctcccaggtg ccaagagagc acccaccctg cttcggacaa ccctgacata attgccagca 1560
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taaqaaactg attgattaaa aaatttccca aagtgtcctg aagtgtctct tcaaatacat 1680
gttgatctgt ggagttgatt cctttccttc tcttggtttt agacaaatgt aaacaaagct 1740
ctgatcctta aaattgctat gctgatagag tggtgagggc tggaagcttg atcaagtcct 1800
gtttcttctt gacacagact gattaaaaaat taaaagnaaa aaa
<210> 132
<211> 490
<212> PRT
<213> Homo sapiens
<400> 132
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Gln Gln Gln Gln Gln Pro Gln Ser Pro Gln Arg Leu Leu Ala Val
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Ile Leu Trp Phe Gln Leu Ala Leu Cys Phe Gly Pro Ala Gln Leu Thr
Gly Gly Phe Asp Asp Leu Gln Val Cys Ala Asp Pro Gly Ile Pro Glu
Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe Phe Glu Gly Ser Val
                     70
Ala Arg Phe His Cys Gln Asp Gly Phe Lys Leu Lys Gly Ala Thr Lys
Arg Leu Cys Leu Lys His Phe Asn Gly Thr Leu Gly Trp Ile Pro Ser
Asp Asn Ser Ile Cys Val Gln Glu Asp Cys Arg Ile Pro Gln Ile Glu
                                                 125
                             120
        115
Asp Ala Glu Ile His Asn Lys Thr Tyr Arg His Gly Glu Lys Leu Ile
                         135
    130
Ile Thr Cys His Glu Gly Phe Lys Ile Arg Tyr Pro Asp Leu His Asn
                                         155
                     150
Met Val Ser Leu Cys Arg Asp Asp Gly Thr Trp Asn Asn Leu Pro Ile
                                                         175
                                     170
                 165
Cys Gln Gly Cys Leu Arg Pro Leu Ala Ser Ser Asn Gly Tyr Val Asn
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			180					185					190		
Ile	Ser	Glu 195	Leu	Gln	Thr	Ser	Phe 200	Pro	Val	Gly	Thr	Val 205	Ile	Ser	Tyr
Arg	Cys 210	Phe	Pro	Gly	Phe	Lys 215	Leu	Asp	Gly	Ser	Ala 220	Tyr	Leu	Glu	Cys
Leu 225	Gln	Asn	Leu	Ile	Trp 230	Ser	Ser	Ser	Pro	Pro 235	Arg	Cys	Leu	Ala	Leu 240
Glu	Ala	Gln	Val	Cys 245	Pro	Leu	Pro	Pro	Met 250	Val	Ser	His	Gly	Asp 255	Phe
Val	Cys	His	Pro 260	Arg	Pro	Cys	Glu	Arg 265	Tyr	Asn	His	Gly	Thr 270	Val	Val
Glu	Phe	Tyr 275	Cys	Asp	Pro	Gly	Tyr 280	Ser	Leu	Thr	Ser	Asp 285	Tyr	Lys	Tyr
Ile	Thr 290	Cys	Gln	Tyr	Gly	Glu 295	Trp	Phe	Pro	Ser	Tyr 300	Gln	Val	Tyr	Cys
Ile 305		Ser	Glu	Gln	Thr 310		Pro	Ser	Thr	His 315	Glu	Thr	Leu	Leu	Thr 320
Thr	Trp	Lys	Ile	Val 325		Phe	Thr	Ala	Thr 330	Ser	Val	Leu	Leu	Val 335	Leu
Leu	Leu	Val	Ile 340		Ala	Arg	Met	Phe 345	Gln	Thr	Lys	Phe	Lys 350	Ala	His
Phe	Pro	Pro 355		Gly	Pro	Pro	Arg 360		Ser	Ser	Ser	Asp 365	Pro	Asp	Phe
Val	Val 370		. Asp	Gly	v Val	. Pro		Met	Leu	Pro	Ser 380	Tyr	Asp	Glu	ı Ala
Val 385		Gly	gly	Let	1 Ser 390		Leu	Gly	Pro	395 395	y Tyr	Met	Ala	Ser	Val 400
Gly	glr.	ı Gly	у Суз	9 Pro		ı Pro	Val	. Asp	Asp 410	Glr	n Ser	r Pro	Pro	Ala 415	a Tyr
Pro	Gly	7 Sei	Gl ₃		, Thi	Asp	Thr	Gl _y 425		o Gly	y Glu	ı Ser	Glu 430	ı Thi	Cys
Asp	Sei	val 435		c Gly	y Sei	r Sei	Glu 440		ı Let	ı Glı	n Sei	Let 445	1 Ty1	r Sei	r Pro
Pro	Arg		s Glı	n Glı	ı Sei	r Thi 45!		s Pro	o Ala	a Se	r Ası 460	o Ası	n Pro	As _l	o Ile

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Ile Ala Ser Thr Ala Glu Glu Val Ala Ser Thr Ser Pro Gly Ile His
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                    470
465
His Ala His Trp Val Leu Phe Leu Arg Asn
                485
<210> 133
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 133
                                                                    23
atctcctatc gctgctttcc cgg
<210> 134
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 134
                                                                    23
agccaggatc gcagtaaaac tcc
<210> 135
<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
       oligonucleotide probe
<400> 135
                                                                    50
atttaaactt gatgggtctg cgtatcttga gtgcttacaa aaccttatct
<210> 136
<211> 1815
 <212> DNA
 <213> Homo sapiens
 <400> 136
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gatgctgctg ccgcggttgc agttgtcgcg cacgcctctg cccgccagcc cgctccaccg 120
ccgtagcgcc cgagtgtcgg ggggcgcacc cgagtcgggc catgaggccg ggaaccgcgc 180
 tacaggccgt gctgctggcc gtgctgctgg tggggctgcg ggccgcgacg ggtcgcctgc 240
 tgagtgcctc ggatttggac ctcagaggag ggcagccagt ctgccgggga gggacacaga 300
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ggccttgtta taaagtcatt tacttccatg atacttctcg aagactgaac tttgaggaag 360
ccaaagaagc ctgcaggagg gatggaggcc agctagtcag catcgagtct gaagatgaac 420
agaaactgat agaaaagttc attgaaaacc tcttgccatc tgatggtgac ttctggattg 480
ggctcaggag gcgtgaggag aaacaaagca atagcacagc ctgccaggac ctttatgctt 540
ggactgatgg cagcatatca caatttagga actggtatgt ggatgagccg tcctgcggca 600
gegaggtetg egtggteatg taccateage categgeace egetggeate ggaggeecet 660
acatgttcca gtggaatgat gaccggtgca acatgaagaa caatttcatt tgcaaatatt 720
ctgatgagaa accagcagtt ccttctagag aagctgaagg tgaggaaaca gagctgacaa 780
cacctgtact tccagaagaa acacaggaag aagatgccaa aaaaacattt aaagaaagta 840
gagaagetge ettgaatetg geetacatee taateeceag eatteeeett eteeteetee 900
ttgtggtcac cacagttgta tgttgggttt ggatctgtag aaaaagaaaa cgggagcagc 960
cagaccctag cacaaagaag caacacca tctggccctc tcctcaccag ggaaacagcc 1020
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ggccagacct gaagaatatt tcattccgag tgtgttcggg agaagccact cccgatgaca 1140
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atattatcat acagacagaa aatccagaat cttttcaaag cccacatatg gtagcacagg 1740
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agcaggaaaa aaaaa
<210> 137
<211> 382
<212> PRT
<213> Homo sapiens
<400> 137
Met Arg Pro Gly Thr Ala Leu Gln Ala Val Leu Leu Ala Val Leu Leu
Val Gly Leu Arg Ala Ala Thr Gly Arg Leu Leu Ser Ala Ser Asp Leu
                                 25
             20
Asp Leu Arg Gly Gly Gln Pro Val Cys Arg Gly Gly Thr Gln Arg Pro
Cys Tyr Lys Val Ile Tyr Phe His Asp Thr Ser Arg Arg Leu Asn Phe
                          55
Glu Glu Ala Lys Glu Ala Cys Arg Arg Asp Gly Gly Gln Leu Val Ser
                      70
 65
Ile Glu Ser Glu Asp Glu Gln Lys Leu Ile Glu Lys Phe Ile Glu Asn
                                      90
Leu Leu Pro Ser Asp Gly Asp Phe Trp Ile Gly Leu Arg Arg Arg Glu
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- Glu Lys Gln Ser Asn Ser Thr Ala Cys Gln Asp Leu Tyr Ala Trp Thr 115 120 125
- Asp Gly Ser Ile Ser Gln Phe Arg Asn Trp Tyr Val Asp Glu Pro Ser 130 135 140
- Cys Gly Ser Glu Val Cys Val Val Met Tyr His Gln Pro Ser Ala Pro 145 150 155 160
- Ala Gly Ile Gly Gly Pro Tyr Met Phe Gln Trp Asn Asp Asp Arg Cys 165 170 175
- Asn Met Lys Asn Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala 180 185 190
- Val Pro Ser Arg Glu Ala Glu Gly Glu Glu Thr Glu Leu Thr Thr Pro 195 200 205
- Val Leu Pro Glu Glu Thr Gln Glu Glu Asp Ala Lys Lys Thr Phe Lys 210 215 220
- Glu Ser Arg Glu Ala Ala Leu Asn Leu Ala Tyr Ile Leu Ile Pro Ser 225 230 235 240
- Ile Pro Leu Leu Leu Leu Val Val Thr Thr Val Val Cys Trp Val 245 250 255
- Trp Ile Cys Arg Lys Arg Lys Arg Glu Gln Pro Asp Pro Ser Thr Lys 260 265 270
- Lys Gln His Thr Ile Trp Pro Ser Pro His Gln Gly Asn Ser Pro Asp 275 280 285
- Leu Glu Val Tyr Asn Val Ile Arg Lys Gln Ser Glu Ala Asp Leu Ala 290 295 300
- Glu Thr Arg Pro Asp Leu Lys Asn Ile Ser Phe Arg Val Cys Ser Gly 305 310 315
- Glu Ala Thr Pro Asp Asp Met Ser Cys Asp Tyr Asp Asn Met Ala Val 325 330 335
- Asn Pro Ser Glu Ser Gly Phe Val Thr Leu Val Ser Val Glu Ser Gly 340 345 350
- Phe Val Thr Asn Asp Ile Tyr Glu Phe Ser Pro Asp Gln Met Gly Arg 355 360 365
- Ser Lys Glu Ser Gly Trp Val Glu Asn Glu Ile Tyr Gly Tyr 370 375 380

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<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 138
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                                                                   50
<210> 139
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 139
                                                                   24
aaqccaaaga agcctgcagg aggg
<210> 140
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
<400> 140
                                                                   24
caqtccaaqc ataaaggtcc tggc
<210> 141
 <211> 1514
 <212> DNA
 <213> Homo sapiens
 <400> 141
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gcatccgcag gttcccgcgg acttgggggc gcccgctgag ccccggcgcc cgcagaagac 120
ttgtgtttgc ctcctgcagc ctcaacccgg agggcagcga gggcctacca ccatgatcac 180
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 cetgcaccag eggeggtgg ceetggeega getgeaggag geegatggee agtgteeggt 300
 cgaccgcagc ctgctgaagt tgaaaatggt gcaggtcgtg tttcgacacg gggctcggag 360
 tecteteaag eegeteeege tggaggagea ggtagagtgg aacceeeage tattagaggt 420
 cccaccccaa actcagtttg attacacagt caccaatcta gctggtggtc cgaaaccata 480
 ttctccttac gactctcaat accatgagac caccctgaag gggggcatgt ttgctgggca 540
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 cactaacatt tttcggaatc tggagtccac ccgttgtttg ctggctgggc ttttccagtg 720
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tcagaaagaa ggacccatca tcatccacac tgatgaagca gattcagaag tcttgtatcc 780
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Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly Ala Arg Ser Pro
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Ala Gly Gly Pro Lys Pro Tyr Ser Pro Tyr Asp Ser Gln Tyr His Glu
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170

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Gln Pro Gly Ile Ser Glu Asp Leu Lys Lys Val Lys Asp Arg Met Gly 225 230 235 240

Ile Asp Ser Ser Asp Lys Val Asp Phe Phe Ile Leu Leu Asp Asn Val 245 250 255

Ala Ala Glu Gln Ala His Asn Leu Pro Ser Cys Pro Met Leu Lys Arg 260 265 270

Phe Ala Arg Met Ile Glu Gln Arg Ala Val Asp Thr Ser Leu Tyr Ile 275 280 285

Leu Pro Lys Glu Asp Arg Glu Ser Leu Gln Met Ala Val Gly Pro Phe 290 295 300

Leu His Ile Leu Glu Ser Asn Leu Leu Lys Ala Met Asp Ser Ala Thr 305 310 315 320

Ala Pro Asp Lys Ile Arg Lys Leu Tyr Leu Tyr Ala Ala His Asp Val 325 330 335

Thr Phe Ile Pro Leu Leu Met Thr Leu Gly Ile Phe Asp His Lys Trp 340 345 350

Pro Pro Phe Ala Val Asp Leu Thr Met Glu Leu Tyr Gln His Leu Glu 355 360 365

Ser Lys Glu Trp Phe Val Gln Leu Tyr Tyr His Gly Lys Glu Gln Val 370 375 380

Pro Arg Gly Cys Pro Asp Gly Leu Cys Pro Leu Asp Met Phe Leu Asn 385 390 395 400

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Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val Leu Cys Arg Glu
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Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser Gly Ile Leu Tyr Glu
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 Thr Gly Thr Glu Asp Thr Leu Ala Gln Cys Glu Gln Glu Glu Val Tyr
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100

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Ser Ser Phe Ser Pro Val Pro Glu Gly Val Arg Leu Ala Asp Gly Pro 130 135 140

Gly His Cys Lys Gly Arg Val Glu Val Lys His Gln Asn Gln Trp Tyr 145 150 155 160

Thr Val Cys Gln Thr Gly Trp Ser Leu Arg Ala Ala Lys Val Val Cys 165 170 175

Arg Gln Leu Gly Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn 180 185 190

Lys His Ala Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys 195 200 205

Ser Gly Arg Glu Ala Thr Leu Gln Asp Cys Pro Ser Gly Pro Trp Gly 210 215 220

Lys Asn Thr Cys Asn His Asp Glu Asp Thr Trp Val Glu Cys Glu Asp 225 230 235 240

Pro Phe Asp Leu Arg Leu Val Gly Gly Asp Asn Leu Cys Ser Gly Arg 245 250 255

Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp Asp Asn 260 265 270

Trp Gly Glu Lys Glu Asp Gln Val Val Cys Lys Gln Leu Gly Cys Gly 275 280 285

Lys Ser Leu Ser Pro Ser Phe Arg Asp Arg Lys Cys Tyr Gly Pro Gly 290 295 300

Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys Ser Gly Glu Glu Gln 305 310 315 320

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Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu 50 55 60

Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu 65 70 75 80

Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu

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90
95

Val Thr Phe Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala 100 105 110

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Gly Ile Ser Tyr Arg Gly Thr Ile Met Asp Thr Thr Val Asp Val Asp 130 135 140

Lys Arg Val Met Glu Thr Asn Tyr Phe Gly Pro Val Ala Leu Thr Lys 145 150 155 160

Ala Leu Leu Pro Ser Met Ile Lys Arg Gln Gly His Ile Val Ala 165 170 175

Ile Ser Ser Ile Gln Gly Lys Met Ser Ile Pro Phe Arg Ser Ala Tyr 180 185 190

Ala Ala Ser Lys His Ala Thr Gln Ala Phe Phe Asp Cys Leu Arg Ala 195 200 205

Glu Met Glu Gln Tyr Glu Ile Glu Val Thr Val Ile Ser Pro Gly Tyr

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Tyr	Gly	Val	Met	Asp 245	Thr	Thr	Thr	Ala	Gln 250	Gly	Arg	Ser	Pro	Val 255	Glu	
Val	Ala	Gln	Asp 260	Val	Leu	Ala	Ala	Val 265	Gly	Lys	Lys	Lys	Lys 270	Asp	Val	
Ile	Leu	Ala 275	Asp	Leu	Leu	Pro	Ser 280	Leu	Ala	Val	Tyr	Leu 285	Arg	Thr	Leu	
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Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys Ser Lys Leu Val 50 55 60

Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu Thr Ala Ala Lys Cys 65 70 75 80

Lys Gly Leu Gly Ala Lys Val His Thr Phe Val Val Asp Cys Ser Asn 85 90 95

Arg Glu Asp Ile Tyr Ser Ser Ala Lys Lys Val Lys Ala Glu Ile Gly
100 105 110

Asp Val Ser Ile Leu Val Asn Asn Ala Gly Val Val Tyr Thr Ser Asp 115 120 125

Leu Phe Ala Thr Gln Asp Pro Gln Ile Glu Lys Thr Phe Glu Val Asn 130 135 140

Lys Asn Asn His Gly His Ile Val Thr Val Ala Ser Ala Ala Gly His 165 170 175

Val Ser Val Pro Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala 180 185 190

Val Gly Phe His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile 195 200 205

Thr Gly Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly 210 215 220

Phe Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu 225 230 235 240

Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys Met 245 250 255

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Leu Cys Lys Asp Asp Pro Lys Phe His Ser Tyr Val Ser Leu Pro Phe 340 345 350

Gly Cys Thr Arg Ala Gly Val Glu Tyr Arg Leu Gln Ala Ala Tyr 355 360 365

Leu Ala Lys Pro Gly Asp Ser Leu Ala Gln Ala Phe Asn Ile Thr Ser 370 375 380

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- Asp Arg Leu Leu Lys Met Arg Trp Ser Gly Leu Asn Ala Ile Gln Phe 65 70 75 80
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- Asn Gly Ser Arg Asp Leu Ile Ala Phe Leu Asn Glu Ala Ala Leu Ala 100 105 110
- Asn Leu Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ala Glu Trp 115 120 125
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- Asn Ile Ile Ser Ile Gln Val Glu Asn Glu Tyr Gly Ser Tyr Arg Ala 180 185 190
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- Leu Gly Glu Lys Ile Leu Leu Phe Thr Thr Asp Gly Pro Glu Gly Leu 210 215 220
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- Trp Gly Gln Asn His Ser Thr Arg Ser Val Ser Ala Val Thr Lys Gly 275 280 285
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- Glu Ala Gly Asp Pro Thr Pro Lys Leu Phe Ala Leu Arg Asp Val Ile

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Pro	Ile	Leu	Gly 500	Gln	Thr	Ile	Leu	Thr 505	Gln	Trp	Met	Met	Phe 510	Pro	Leu
Lys	Ile	Asp 515	Asn	Leu	Val	Lys	Trp 520	Trp	Phe	Pro	Leu	Gln 525	Leu	Pro	Lys
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- Glu Ser Leu Arg Glu Leu Arg His Leu Lys Ile Leu His Val Lys Ser 225 230 235 240
- Asn Leu Thr Lys Val Pro Ser Asn Ile Thr Asp Val Ala Pro His Leu 245 250 255
- Thr Lys Leu Val Ile His Asn Asp Gly Thr Lys Leu Leu Val Leu Asn 260 265 270
- Ser Leu Lys Lys Met Met Asn Val Ala Glu Leu Glu Leu Gln Asn Cys 275 280 285
- Glu Leu Glu Arg Ile Pro His Ala Ile Phe Ser Leu Ser Asn Leu Gln 290 295 300
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- Ser Phe Gln His Leu Lys Arg Leu Thr Cys Leu Lys Leu Trp His Asn 325 330 335
- Lys Ile Val Thr Ile Pro Pro Ser Ile Thr His Val Lys Asn Leu Glu 340 345 350
- Ser Leu Tyr Phe Ser Asn Asn Lys Leu Glu Ser Leu Pro Val Ala Val 355 360 365
- Phe Ser Leu Gln Lys Leu Arg Cys Leu Asp Val Ser Tyr Asn Asn Ile 370 375 380
- Ser Met Ile Pro Ile Glu Ile Gly Leu Leu Gln Asn Leu Gln His Leu 385 390 395 400
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- Pro Asp Gly Ser Cys Glu Ser Glu Asn Ile Lys Val Phe Asp Gly Thr 85 90 95
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- Ser Phe Lys Tyr Glu Asp Phe Gly Pro Leu Phe Thr Ala Lys Phe Phe 100 105 110
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- Ile Val Lys Glu Leu Glu Val Ala Ile Arg Asn Arg Thr Asp Leu Arg 165 170 175
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- Glu Asp Glu Ser Ser Ser Phe His Lys Arg Gln Phe Pro Val Ser Lys 195 200 205
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- Lys Gln Leu Val Glu Thr Val Ser Cys Gly Gly Asn Leu Leu Met Asn 325 330 335

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Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala
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 Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val
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 Ile Ser Arg Ile Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly
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<213> Artificial Sequence

<210> 203

<211> 22

<212> DNA

<213> Artificial Sequence

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<213> Artificial Sequence
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Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn

75

70

Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe 85 90 95

Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met 100 105 110

Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys 115 120 125

Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Lys Tyr Phe Asn Asp Lys 130 135 140

Thr Ile Asp Glu Glu Leu Glu Arg Asp Lys Arg Val Thr Trp Ile Val 145 150 155 160

Glu Phe Phe Ala Asn Trp Ser Asn Asp Cys Gln Ser Phe Ala Pro Ile 165 170 175

Tyr Ala Asp Leu Ser Leu Lys Tyr Asn Cys Thr Gly Leu Asn Phe Gly 180 185 190

Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val

Ser Thr Ser Pro Leu Thr Lys Gln Leu Pro Thr Leu Ile Leu Phe Gln 210 215 220

Gly Gly Lys Glu Ala Met Arg Arg Pro Gln Ile Asp Lys Lys Gly Arg 225 230 235 240

Ala Val Ser Trp Thr Phe Ser Glu Glu Asn Val Ile Arg Glu Phe Asn 245 250 255

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Arg Glu Ile His Lys Ile Thr Asn Asn Gln Thr Gly Gln Met Val Phe 115 120 125

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His Glu Cys Ile Ile Asp Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln 145 150 155 160

Phe Ala Ser Phe Gln Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met 165 170 175

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Gly His Cys Thr Lys Met Ala Thr Arg Gly Ser Asn Gly Thr Ile Cys 195 200 205

Asp Asn Gln Arg Asp Cys Gln Pro Gly Leu Cys Cys Ala Phe Gln Arg 210 215 220

Gly Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu 225 230 235 240

Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu Leu 245 250 255

Glu Pro Asp Gly Ala Leu Asp Arg Cys Pro Cys Ala Ser Gly Leu Leu 260 265 270

Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys Pro Thr Phe 275 280 285

Val Gly Ser Arg Asp Gln Asp Gly Glu Ile Leu Leu Pro Arg Glu Val 290 295 300

Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu Glu Val Arg Gln Glu 305 310 315 320

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Val	L Ile	e Arç	g Tr) Ala 380		ı Ala	t Thr	Gly	7 Thr 385		y Val	. Arg	g Phe	390
Gli	ı Pro	o Gli	n Se	r Thr 395		ı Cys	s Ala	a Glu	1 Pro 400		Asp	Let	ı Glr	405
Т ол	- D	o 770'	7 7 70	~ മിച	. 7727	Dro	Dhe	<u> </u>	r Gli	ı Met	The	Ası	o His	s Cys

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Cys Ala His Pro Leu Ala Thr Leu Phe Lys Ile Leu Ala Ser Phe
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Tyr Ile Ser Leu Val Ile Phe Tyr Gly Leu Ile Cys Met Tyr Thr
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Leu Trp Trp Met Leu Arg Arg Ser Leu Lys Lys Tyr Ser Phe Glu 80 85 90

Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile Pro Asp Val Lys

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Thr	Ile	Pro	Pro	Ser 200	Ile	Ala	Gln	Leu	Thr 205	Gly	Leu	Lys	Glu	Leu 210
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Ile Thr Ala Asn Arg Ile Glu Thr Leu Pro Pro Glu Leu Phe Gln
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<210> 251

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 251

caacaatgag ggcaccaagc 20

<210> 252

<211> 24

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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic Oligonucleotide Probe
<400> 252
gatggctagg ttctggaggt tctg 24
<210> 253
<211> 47
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic Oligonucleotide Probe
<400> 253
caacctgcag gagattgacc tcaaggacaa caacctcaag accatcg 47
<210> 254
<211> 1650
<212> DNA
<213> Homo Sapien
<400> 254
 gcctgttgct gatgctgccg tgcggtactt gtcatggagc tggcactgcg 50
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 tgaacgcagg agctgtcatt gactggccca cagaggaggg caaggaagta 150
 tgggattatg tgacggtccg caaggatgcc tacatgttct ggtggctcta 200
 ttatgccacc aactcctgca agaacttctc agaactgccc ctggtcatgt 250
 ggcttcaggg cggtccaggc ggttctagca ctggatttgg aaactttgag 300
 gaaattgggc cccttgacag tgatctcaaa ccacggaaaa ccacctggct 350
 ccaggetgcc agtetectat ttgtggataa tecegtgggc aetgggttca 400
 gttatgtgaa tggtagtggt gcctatgcca aggacctggc tatggtggct 450
 tcagacatga tggttctcct gaagaccttc ttcagttgcc acaaagaatt 500
 ccagacagtt ccattctaca ttttctcaga gtcctatgga ggaaaaatgg 550
 cagctggcat tggtctagag ctttataagg ccattcagcg agggaccatc 600
 aagtgcaact ttgcgggggt tgccttgggt gattcctgga tctcccctgt 650
 tgattcggtg ctctcctggg gaccttacct gtacagcatg tctcttctcg 700
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aagacaaagg tctggcagag gtgtctaagg ttgcagagca agtactgaat 750 qccqtaaata aqqqqctcta cagagaggcc acagagctgt gggggaaagc 800 agaaatgatc attgaacaga acacagatgg ggtgaacttc tataacatct 850 taactaaaag cactcccacg tctacaatgg agtcgagtct agaattcaca 900 cagagecace tagtttgtet ttgteagege caegtgagae acetaeaaeg 950 agatgcctta agccagctca tgaatggccc catcagaaag aagctcaaaa 1000 ttattcctga ggatcaatcc tggggaggcc aggctaccaa cgtctttgtg 1050 aacatggagg aggacttcat gaagccagtc attagcattg tggacgagtt 1100 gctggaggca gggatcaacg tgacggtgta taatggacag ctggatctca 1150 tcgtagatac catgggtcag gaggcctggg tgcggaaact gaagtggcca 1200 quactoccta autteaque qetquagtgg auggeeetgt acagtgaeec 1250 taaatctttg gaaacatctg cttttgtcaa gtcctacaag aaccttgctt 1300 totactggat totgaaaget ggtcatatgg ttoottotga ccaaggggac 1350 atgqctctqa agatgatgag actggtgact cagcaagaat aggatggatg 1400 gggctggaga tgagctggtt tggccttggg gcacagagct gagctgaggc 1450 cgctgaagct gtaggaagcg ccattcttcc ctgtatctaa ctggggctgt 1500 gatcaagaag gttctgacca gcttctgcag aggataaaat cattgtctct 1550 ggaggcaatt tggaaattat ttctgcttct taaaaaaacc taagattttt 1600 taaaaaattg atttgttttg atcaaaataa aggatgataa tagatattaa 1650

<210> 255

<211> 452

<212> PRT

<213> Homo Sapien

<400> 255

Met Glu Leu Ala Leu Arg Arg Ser Pro Val Pro Arg Trp Leu Leu 1 5 10 15

Leu Leu Pro Leu Leu Gly Leu Asn Ala Gly Ala Val Ile Asp 20 25 30

Trp Pro Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val
35 40 45

Arg Lys As	o Ala T	yr Met 50	Phe	Trp	Trp	Leu 55	Tyr	Tyr	Ala	Thr	Asn 60
Ser Cys Ly	s Asn P	he Ser 65	Glu	Leu	Pro	Leu 70	Val	Met	Trp	Leu	Gln 75
Gly Gly Pro	-	ly Ser 80	Ser	Thr	Gly	Phe 85	Gly	Asn	Phe	Glu	Glu 90
Ile Gly Pro	o Leu A	sp Ser 95	Asp	Leu	Lys	Pro 100	Arg	Lys	Thr	Thr	Trp 105
Leu Gln Al		er Leu 10	Leu	Phe	Val	Asp 115	Asn	Pro	Val	Gly	Thr 120
Gly Phe Se		al Asn 25	Gly	Ser	Gly	Ala 130	Tyr	Ala	Lys	Asp	Leu 135
Ala Met Va		er Asp 40	Met	Met	Val	Leu 145	Leu	Lys	Thr	Phe	Phe 150
Ser Cys Hi	_	lu Phe 55	Gln	Thr	Val	Pro 160	Phe	Tyr	Ile	Phe	Ser 165
Glu Ser Ty	_	ly Lys 70	Met	Ala	Ala	Gly 175	Ile	Gly	Leu	Glu	Leu 180
Tyr Lys Al		ln Arg .85	Gly	Thr	Ile	Lys 190	Cys	Asn	Phe	Ala	Gly 195
Val Ala Le		sp Ser	Trp	Ile	Ser	Pro 205	Val	Asp	Ser	Val	Leu 210
Ser Trp Gl	-	yr Leu 15	Tyr	Ser	Met	Ser 220	Leu	Leu	Glu	Asp	Lys 225
Gly Leu Al		al Ser	Lys	Val	Ala	Glu 235	Gln	Val	Leu	Asn	Ala 240
Val Asn Ly		eu Tyr 45	Arg	Glu	Ala	Thr 250	Glu	Leu	Trp	Gly	Lys 255
Ala Glu Me		le Glu 60	Gln	Asn	Thr	Asp 265	Gly	Val	Asn	Phe	Tyr 270
Asn Ile Le		ys Ser 75	Thr	Pro	Thr	Ser 280	Thr	Met	Glu	Ser	Ser 285
Leu Glu Ph		ln Ser	His	Leu	Val	Cys 295	Leu	Cys	Gln	Arg	His 300
Val Arg Hi	s Leu G	ln Arg	Asp	Ala	Leu	Ser	Gln	Leu	Met	Asn	Gly

	305				310					315
Pro Ile Arg I	Lys Lys 320	Leu I	Lys I		Pro 325	Glu	Asp	Gln	Ser	Trp 330
Gly Gly Gln A	Ala Thr 335	Asn V	/al Pł		Asn 340	Met	Glu	Glu	Asp	Phe 345
Met Lys Pro	Val Ile 350	Ser I	Ile Va		Glu 355	Leu	Leu	Glu	Ala	Gly 360
Ile Asn Val	Thr Val 365	Tyr A	Asn G		Leu 370	Asp	Leu	Ile	Val	Asp 375
Thr Met Gly	Gln Glu 380	Ala T	rp V		Lys 385	Leu	Lys	Trp	Pro	Glu 390
Leu Pro Lys	Phe Ser 395	Gln I	Leu Ly	ys Trp	Lys 400	Ala	Leu	Tyr	Ser	Asp 405
Pro Lys Ser	Leu Glu 410	Thr S	Ser A	la Phe	Val 415	Lys	Ser	Tyr	Lys	Asn 420
Leu Ala Phe	Tyr Trp 425	Ile I	Leu Ly		Gly 430	His	Met	Val	Pro	Ser 435
Asp Gln Gly	Asp Met 440	Ala I	Leu L	ys Met	Met 445	Arg	Leu	Val	Thr	Gln 450

Gln Glu

<210> 256

<211> 1100

<212> DNA

<213> Homo Sapien

<400> 256

ggccgcgga gaggaggca tgggcgcg cggggcgctg ctgctggcg 50
tgctgctggc tcgggctgga ctcaggaagc cggagtcgca ggaggcggcg 100
ccgttatcag gaccatgcgg ccgacgggtc atcacgtcgc gcatcgtggg 150
tggagaggac gccgaactcg ggcgttggcc gtggcagggg agcctgcgcc 200
tgtgggattc ccacgtatgc ggagtgagcc tgctcagcca ccgctgggca 250
ctcacggcgg cgcactgctt tgaaacctat agtgacctta gtgatccctc 300
cgggtggatg gtccagtttg gccagctgac ttccatgcca tccttctgga 350
gcctgcaggc ctactacacc cgttacttcg tatcgaatat ctatctgagc 400

tgcacctgtc acctacacta accatacaca gcccatctgt ctccaggcct 500 ccacatttga gtttgagaac cggacagact gctgggtgac tggctggggg 550 tacatcaaag aggatgaggc actgccatct ccccacaccc tccaggaagt 600 tcaggtcgc atcataaaca actctatgtg caaccacctc ttcctaagt 650 acagtttccg caaggacatc tttggagaca tggtttgtgc tggcaacgcc 700 caaggcggga aggatgctg cttcggtgac tcaggtggac ccttggcctg 750 tacacaagaat ggactggt atcagattg tcaggtggac ccttggcctg 750 acaggcggga aggatgcctg cttcggtgac tcaggtggac ccttggcctg 750 taacaagaat ggactgtgt atcagattgg agtcgtgac tggggagtgg 800 gctgtggtcg gcccaatcgg cccggtgtct acaccaatat cagccaccac 850 tttggagtga tccagaagct gatggcccaa agtggcatgt cccagcaga 900 cccctcctgg ccactactct ttttccctct tctctgggct ctccactcc 950 tgggggccggt ctgagcctac ctgagcccat gcagcctggg gccactgcca 1000 agtcaggccc tggttcttc ctgtcttgtt tggtaataaa cacaatacaaaa 1100

<210> 257

<211> 314

<212> PRT

<213> Homo Sapien

<400> 257

Met Gly Ala Arg Gly Ala Leu Leu Leu Ala Leu Leu Leu Ala Arg
1 5 10 15

Ala Gly Leu Arg Lys Pro Glu Ser Gln Glu Ala Ala Pro Leu Ser

20 25 30

Gly Pro Cys Gly Arg Arg Val Ile Thr Ser Arg Ile Val Gly Gly
35 40 45

Glu Asp Ala Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg
50 55 60

Leu Trp Asp Ser His Val Cys Gly Val Ser Leu Leu Ser His Arg
65 70 75

Trp Ala Leu Thr Ala Ala His Cys Phe Glu Thr Tyr Ser Asp Leu
80 85 90

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Ser Asp Pro Ser Gly Trp Met Val Gln Phe Gly Gln Leu Thr Ser
                                    100
Met Pro Ser Phe Trp Ser Leu Gln Ala Tyr Tyr Thr Arg Tyr Phe
                110
Val Ser Asn Ile Tyr Leu Ser Pro Arg Tyr Leu Gly Asn Ser Pro
                                    130
                125
Tyr Asp Ile Ala Leu Val Lys Leu Ser Ala Pro Val Thr Tyr Thr
                                    145
                140
Lys His Ile Gln Pro Ile Cys Leu Gln Ala Ser Thr Phe Glu Phe
Glu Asn Arq Thr Asp Cys Trp Val Thr Gly Trp Gly Tyr Ile Lys
Glu Asp Glu Ala Leu Pro Ser Pro His Thr Leu Gln Glu Val Gln
                                     190
Val Ala Ile Ile Asn Asn Ser Met Cys Asn His Leu Phe Leu Lys
Tyr Ser Phe Arg Lys Asp Ile Phe Gly Asp Met Val Cys Ala Gly
Asn Ala Gln Gly Gly Lys Asp Ala Cys Phe Gly Asp Ser Gly Gly
                                     235
Pro Leu Ala Cys Asn Lys Asn Gly Leu Trp Tyr Gln Ile Gly Val
Val Ser Trp Gly Val Gly Cys Gly Arg Pro Asn Arg Pro Gly Val
Tyr Thr Asn Ile Ser His His Phe Glu Trp Ile Gln Lys Leu Met
                                     280
                                                         285
                275
Ala Gln Ser Gly Met Ser Gln Pro Asp Pro Ser Trp Pro Leu Leu
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Phe Phe Pro Leu Leu Trp Ala Leu Pro Leu Leu Gly Pro Val
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<210> 258

<211> 2427

<212> DNA

<213> Homo Sapien

<400> 258

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<210> 259
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Ser Gly Lys Cys Ser Tyr Ser Pro Glu Pro Asp Gln Arg Arg Thr

<211> 556

<212> PRT

<213> Homo Sapien

<400> 259

Met Gly Leu Gln Ala Cys Leu Leu Gly Leu Phe Ala Leu Ile Leu 1 5 10 15

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Leu	Pro	Pro	Gly	Trp 35	Val	Ser	Leu	Gly	Arg 40	Ala	Asp	Pro	Glu	Glu 45
Glu	Leu	Ser	Leu	Thr 50	Phe	Ala	Leu	Arg	Gln 55	Gln	Asn	Val	Glu	Arg 60
Leu	Ser	Glu	Leu	Val 65	Gln	Ala	Val	Ser	Asp 70	Pro	Ser	Ser	Pro	Gln 75
Tyr	Gly	Lys	Tyr	Leu 80	Thr	Leu	Glu	Asn	Val 85	Ala	Asp	Leu	Val	Arg 90
Pro	Ser	Pro	Leu	Thr 95	Leu	His	Thr	Val	Gln 100	Lys	Trp	Leu	Leu	Ala 105
Ala	Gly	Ala	Gln	Lys 110	Cys	His	Ser	Val	Ile 115	Thr	Gln	Asp	Phe	Leu 120
Thr	Cys	Trp	Leu	Ser 125	Ile	Arg	Gln	Ala	Glu 130	Leu	Leu	Leu	Pro	Gly 135
Ala	Glu	Phe	His	His 140	Tyr	Val	Gly	Gly	Pro 145	Thr	Glu	Thr	His	Val 150
Val	Arg	Ser	Pro	His 155	Pro	Tyr	Gln	Leu	Pro 160	Gln	Ala	Leu	Ala	Pro 165
His	Val	Asp	Phe	Val 170	Gly	Gly	Leu	His	Arg 175	Phe	Pro	Pro	Thr	Ser 180
Ser	Leu	Arg	Gln	Arg 185	Pro	Glu	Pro	Gln	Val 190	Thr	Gly	Thr	Val	Gly 195
Leu	His	Leu	Gly	Val 200	Thr	Pro	Ser	Val	Ile 205	Arg	Lys	Arg	Tyr	Asn 210
Leu	Thr	Ser	Gln	Asp 215	Val	Gly	Ser	Gly	Thr 220	Ser	Asn	Asn	Ser	Gln 225
Ala	Суз	Ala	Gln	Phe 230	Leu	Glu	Gln	Tyr	Phe 235	His	Asp	Ser	Asp	Leu 240
Ala	Gln	Phe	Met	Arg 245	Leu	Phe	Gly	Gly	Asn 250	Phe	Ala	His	Gln	Ala 255
Ser	Val	Ala	Arg	Val 260	Val	Gly	Gln	Gln	Gly 265	Arg	Gly	Arg	Ala	Gly 270
Ile	Glu	Ala	Ser	Leu 275	Asp	Val	Gln	Tyr	Leu 280	Met	Ser	Ala	Gly	Ala 285

Asn	Ile	Ser	Thr	Trp 290	Val	Tyr	Ser	Ser	Pro 295	Gly	Arg	His	Glu	Gly 300
Gln	Glu	Pro	Phe	Leu 305	Gln	Trp	Leu	Met	Leu 310	Leu	Ser	Asn	Glu	Ser 315
Ala	Leu	Pro	His	Val 320	His	Thr	Val	Ser	Tyr 325	Gly	Asp	Asp	Glu	Asp 330
Ser	Leu	Ser	Ser	Ala 335	Tyr	Ile	Gln	Arg	Val 340	Asn	Thr	Glu	Leu	Met 345
Lys	Ala	Ala	Ala	Arg 350	Gly	Leu	Thr	Leu	Leu 355	Phe	Ala	Ser	Gly	Asp 360
Ser	Gly	Ala	Gly	Cys 365	Trp	Ser	Val	Ser	Gly 370	Arg	His	Gln	Phe	Arg 375
Pro	Thr	Phe	Pro	Ala 380	Ser	Ser	Pro	Tyr	Val 385	Thr	Thr	Val	Gly	Gly 390
Thr	Ser	Phe	Gln	Glu 395	Pro	Phe	Leu	Ile	Thr 400	Asn	Glu	Ile	Val	Asp 405
Tyr	Ile	Ser	Gly	Gly 410	Gly	Phe	Ser	Asn	Val 415	Phe	Pro	Arg	Pro	Ser 420
Tyr	Gln	Glu	Glu	Ala 425	Val	Thr	Lys	Phe	Leu 430	Ser	Ser	Ser	Pro	His 435
Leu	Pro	Pro	Ser	Ser 440	Tyr	Phe	Asn	Ala	Ser 445	Gly	Arg	Ala	Tyr	Pro 450
Asp	Val	Ala	Ala	Leu 455	Ser	Asp	Gly	Tyr	Trp 460	Val	Val	Ser	Asn	Arg 465
				470	Val				475					480
Phe	Gly	Gly	Ile	Leu 485	Ser	Leu	Ile	Asn	Glu 490	His	Arg	Ile	Leu	Ser 495
Gly	Arg	Pro	Pro	Leu 500	Gly	Phe	Leu	Asn	Pro 505	Arg	Leu	Tyr	Gln	Gln 510
				515					520					Ser 525
Cys	Leu	Asp	Glu	Glu 530	Val	Glu	Gly	Gln	Gly 535	Phe	Cys	Ser	Gly	Pro 540
Gly	Trp	Asp	Pro	Val 545	Thr	Gly	Trp	Gly	Thr 550		Thr	Ser	Gln	Leu 555

Cys

<210> 260

<211> 1638

<212> DNA

<213> Homo Sapien

<400> 260

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gatttcaacg tggctgtcag aatcactcct ctcaaatatg cccagatttg 1200
ctattggatt aaaggaaact acctggattg tagggagggg tgacacagtg 1250
ttccctcctg gcagcaatta agggtcttca tgttcttatt ttaggagaggg 1300
ccaaattgtt ttttgtcatt ggcgtgcaca cgtgtgtgtg tgtgtgtgtg 1350
tgtgtgtaag gtgtcttata atcttttacc tatttcttac aattgcaaga 1400
tgactggctt tactatttga aaactggttt gtgtatcata tcatataca 1450
tttaagcagt ttgaaggcat acttttgcat agaaataaaa aaaatactga 1500
tttggggcaa tgaggaatat ttgacaatta agttaatctt cacgtttttg 1550
caaactttga ttttattc atctgaactt gtttcaaaga tttatattaa 1600
atatttggca tacaagagat atgaaaaaaa aaaaaaaa 1638

<210> 261

<211> 383

<212> PRT

<213> Homo Sapien

<400> 261

Met Ala Gly Ile Pro Gly Leu Leu Phe Leu Leu Phe Phe Leu Leu

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Cys Ala Val Gly Gln Val Ser Pro Tyr Ser Ala Pro Trp Lys Pro 20 25 30

Thr Trp Pro Ala Tyr Arg Leu Pro Val Val Leu Pro Gln Ser Thr
35 40 45

Leu Asn Leu Ala Lys Pro Asp Phe Gly Ala Glu Ala Lys Leu Glu
50 55 60

Val Ser Ser Cys Gly Pro Gln Cys His Lys Gly Thr Pro Leu
65 70 75

Pro Thr Tyr Glu Glu Ala Lys Gln Tyr Leu Ser Tyr Glu Thr Leu 80 85 90

Tyr Ala Asn Gly Ser Arg Thr Glu Thr Gln Val Gly Ile Tyr Ile

95 100 105

Leu Ser Ser Ser Gly Asp Gly Ala Gln His Arg Asp Ser Gly Ser 110 115 120

Ser	Gly	Lys	Ser	Arg 125	Arg	Lys	Arg	Gln	Ile 130	Tyr	Gly	Tyr	Asp	Ser 135
Arg	Phe	Ser	Ile	Phe 140	Gly	Lys	Asp	Phe	Leu 145	Leu	Asn	Tyr	Pro	Phe 150
Ser	Thr	Ser	Val	Lys 155	Leu	Ser	Thr	Gly	Cys 160	Thr	Gly	Thr	Leu	Val 165
Ala	Glu	Lys	His	Val 170	Leu	Thr	Ala	Ala	His 175	Cys	Ile	His	Asp	Gly 180
Lys	Thr	Tyr	Val	Lys 185	Gly	Thr	Gln	Lys	Leu 190	Arg	Val	Gly	Phe	Leu 195
Lys	Pro	Lys	Phe	Lys 200	Asp	Gly	Gly	Arg	Gly 205	Ala	Asn	Asp	Ser	Thr 210
Ser	Ala	Met	Pro	Glu 215	Gln	Met	Lys	Phe	Gln 220	Trp	Ile	Arg	Val	Lys 225
Arg	Thr	His	Val	Pro 230	Lys	Gly	Trp	Ile	Lys 235	Gly	Asn	Ala	Asn	Asp 240
Ile	Gly	Met	Asp	Tyr 245	Asp	Tyr	Ala	Leu	Leu 250	Glu	Leu	Lys	Lys	Pro 255
His	Lys	Arg	Lys	Phe 260	Met	Lys	Ile	Gly	Val 265	Ser	Pro	Pro	Ala	Lys 270
Gln	Leu	Pro	Gly	Gly 275	Arg	Ile	His	Phe	Ser 280	Gly	Tyr	Asp	Asn	Asp 285
Arg	Pro	Gly	Asn	Leu 290	Val	Tyr	Arg	Phe	Cys 295	Asp	Val	Lys	Asp	Glu 300
Thr	Tyr	Asp	Leu	Leu 305	Tyr	Gln	Gln	Cys	Asp 310	Ala	Gln	Pro	Gly	Ala 315
Ser	Gly	Ser	Gly	Val 320	Tyr	Val	Arg	Met	Trp 325	Lys	Arg	Gln	Gln	Gln 330
Lys	Trp	Glu	Arg	Lys 335	Ile	Ile	Gly	Ile	Phe 340	Ser	Gly	His	Gln	Trp 345
Val	Asp	Met	Asn	Gly 350	Ser	Pro	Gln	Asp	Phe 355	Asn	Val	Ala	Val	Arg 360
Ile	Thr	Pro	Leu	Lys 365	Tyr	Ala	Gln	Ile	Cys 370	Tyr	Trp	Ile	Lys	Gly 375
Asn	Tyr	Leu	Asp	Cys 380	Arg	Glu	Gly							

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<210> 262
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<213> Homo Sapien

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tectagggeg cagegggaeg egggetegg atetgaaagg eggeeagate 1050

cacatetgga tetggatetg eggeggeete gggeggttte eeeegeegta 1100

aataggetea tetaceteta eetetggggg eeeggaegge tgetgeggaa 1150

<211> 1378

<212> DNA

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<210> 263

<211> 317

<212> PRT

<213> Homo Sapien

<400> 263

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Gly Thr Phe Thr Ser Leu Leu Leu Leu Ala Ser Thr Ala Ile Leu 20 25 30

Asn Ala Ala Arg Ile Pro Val Pro Pro Ala Cys Gly Lys Pro Gln 35 40 45

Gln Leu Asn Arg Val Val Gly Gly Glu Asp Ser Thr Asp Ser Glu
50 55 60

Trp Pro Trp Ile Val Ser Ile Gln Lys Asn Gly Thr His His Cys 65 70 75

Ala Gly Ser Leu Leu Thr Ser Arg Trp Val Ile Thr Ala Ala His 80 85 90

Cys Phe Lys Asp Asn Leu Asn Lys Pro Tyr Leu Phe Ser Val Leu 95 100 105

Leu Gly Ala Trp Gln Leu Gly Asn Pro Gly Ser Arg Ser Gln Lys 110 115 120

Val Gly Val Ala Trp Val Glu Pro His Pro Val Tyr Ser Trp Lys 125 130 135

Glu Gly Ala Cys Ala Asp Ile Ala Leu Val Arg Leu Glu Arg Ser 140 145 150

Ile Gln Phe Ser Glu Arg Val Leu Pro Ile Cys Leu Pro Asp Ala 155 160 165

Ser Ile His Leu Pro Pro Asn Thr His Cys Trp Ile Ser Gly Trp
170 175 180

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Gly Ser Ile Gln Asp Gly Val Pro Leu Pro His Pro Gln Thr Leu
                                     190
                 185
Gln Lys Leu Lys Val Pro Ile Ile Asp Ser Glu Val Cys Ser His
                                     205
                 200
Leu Tyr Trp Arg Gly Ala Gly Gln Gly Pro Ile Thr Glu Asp Met
                 215
Leu Cys Ala Gly Tyr Leu Glu Gly Glu Arg Asp Ala Cys Leu Gly
                 230
Asp Ser Gly Gly Pro Leu Met Cys Gln Val Asp Gly Ala Trp Leu
Leu Ala Gly Ile Ile Ser Trp Gly Glu Gly Cys Ala Glu Arg Asn
Arg Pro Gly Val Tyr Ile Ser Leu Ser Ala His Arg Ser Trp Val
                                     280
                 275
Glu Lys Ile Val Gln Gly Val Gln Leu Arg Gly Arg Ala Gln Gly
Gly Gly Ala Leu Arg Ala Pro Ser Gln Gly Ser Gly Ala Ala Ala
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                 305
Arg Ser
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<400> 264
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<211> 19
<212> DNA
<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 265
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<210> 266
<211> 24
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<212> DNA
<213> Artificial Sequence
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<400> 267
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<210> 268
<211> 25
<212> DNA
<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 268
 ggggaattca ccctatgaca ttgcc 25
<210> 269
<211> 24
<212> DNA
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<400> 269
 gaatgccctg caagcatcaa ctgg 24
<210> 270
<211> 50
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<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 270
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<223> Synthetic Oligonucleotide Probe
<400> 271
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<211> 18
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<400> 272
cagccctgcc acatgtgc 18
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<400> 273
 tactgggtgg tcagcaac 18
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<211> 24
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<400> 274
 ggcgaagagc agggtgagac cccg 24
<210> 275
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<223> Synthetic Oligonucleotide Probe
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<223> Synthetic Oligonucleotide Probe
<400> 276
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<210> 277
<211> 18
<212> DNA
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<223> Synthetic Oligonucleotide Probe
<400> 277
ggctatgaca gcaggttc 18
<210> 278
<211> 18
<212> DNA
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<223> Synthetic Oligonucleotide Probe
<400> 278
 tgacaatgac cgaccagg 18
<210> 279
<211> 24
<212> DNA
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<220>
<223> Synthetic Oligonucleotide Probe
<400> 279
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<210> 280
<211> 45
<212> DNA
<213> Artificial Sequence
<220>
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<223> Synthetic Oligonucleotide Probe
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<211> 34
<212> DNA
<213> Artificial Sequence
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<400> 281
cgtctcgagc gctccataca gttcccttgc ccca 34
<210> 282
<211> 61
<212> DNA
<213> Artificial Sequence
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<400> 282
tggagggga gcgggatgct tgtctgggcg actccggggg ccccctcatg 50
tgccaggtgg a 61
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<212> DNA
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 atgctgtgtg ccggctact 119
<210> 284
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<212> DNA
<213> Homo Sapien
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 ccgctactgc tactgctggt ggccaccaca ggccccgttg gagccctcac 100
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agatgaggag aaacgtttga tggtggagct gcacaacctc taccgggccc 150 aggtatecee gaeggeetea gaeatgetge acatgagatg ggaegaggag 200 ctggccgcct tcgccaaggc ctacgcacgg cagtgcgtgt ggggccacaa 250 caaggagege gggegeegeg gegagaatet gttegeeate acagaegagg 300 gcatggacgt gccgctggcc atggaggagt ggcaccacga gcgtgagcac 350 tacaacctca gcgccgccac ctgcagccca ggccagatgt gcggccacta 400 cacgcaggtg gtatgggcca agacagagag gatcggctgt ggttcccact 450 tctqtqaqaa qctccaqqqt gttqaqqaqa ccaacatcqa attactggtg 500 tgcaactatg agcctccggg gaacgtgaag gggaaacggc cctaccagga 550 ggggactccg tgctcccaat gtccctctgg ctaccactgc aagaactccc 600 tctgtgaacc catcggaagc ccggaagatg ctcaggattt gccttacctg 650 gtaactgagg ccccatcctt ccgggcgact gaagcatcag actctaggaa 700 aatgggtact ccttcttccc tagcaacggg gattccggct ttcttggtaa 750 cagaggtete aggeteeetg geaaccaagg etetgeetge tgtggaaacc 800 caggececaa etteettage aacgaaagae eegeeeteea tggeaacaga 850 ggctccacct tgcgtaacaa ctgaggtccc ttccattttg gcagctcaca 900 gcctgccctc cttggatgag gagccagtta ccttccccaa atcgacccat 950 gttcctatcc caaaatcagc agacaaagtg acagacaaaa caaaagtgcc 1000 ctctaggagc ccagagaact ctctggaccc caagatgtcc ctgacagggg 1050 caagggaact cctaccccat gcccaggagg aggctgaggc tgaggctgag 1100 ttgcctcctt ccagtgaggt cttggcctca gtttttccag cccaggacaa 1150 gccaggtgag ctgcaggcca cactggacca cacggggcac acctcctcca 1200 agtecetgee caattteece aatacetetg ceacegetaa tgecaegggt 1250 gggcgtgccc tggctctgca gtcgtccttg ccaggtgcag agggccctga 1300 caagectage gttgtgteag ggetgaacte gggeeetggt eatgtgtggg 1350 geoeteteet gggactactg etectgeete etetggtgtt ggetggaate 1400 ttctgaatgg gataccactc aaagggtgaa gaggtcagct gtcctcctgt 1450
catcttcccc accctgtccc cagcccctaa acaagatact tcttggttaa 1500
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gggattccta ggggcagatg aaggacaagc cccactggag tggggttctt 1800
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<210> 285

<211> 463

<212> PRT

<213> Homo Sapien

<400> 285

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Leu Leu Val Ala Thr Thr Gly Pro Val Gly Ala Leu Thr Asp \$20\$ \$25\$ 30

Glu Glu Lys Arg Leu Met Val Glu Leu His Asn Leu Tyr Arg Ala
35 40 45

Gln Val Ser Pro Thr Ala Ser Asp Met Leu His Met Arg Trp Asp
50 55 60

Glu Glu Leu Ala Ala Phe Ala Lys Ala Tyr Ala Arg Gln Cys Val 65 70 75

Trp Gly His Asn Lys Glu Arg Gly Arg Gly Glu Asn Leu Phe
80 85 90

Ala Ile Thr Asp Glu Gly Met Asp Val Pro Leu Ala Met Glu Glu 95 100 105

Trp His His Glu Arg Glu His Tyr Asn Leu Ser Ala Ala Thr Cys
110 115 120

Ser Pro Gly Gln Met Cys Gly His Tyr Thr Gln Val Val Trp Ala 125 130 135

Lys	Thr	Glu	Arg	Ile 140	Gly	Cys	Gly	Ser	His 145	Phe	Cys	Glu	Lys	Leu 150
Gln	Gly	Val	Glu	Glu 155	Thr	Asn	Ile	Glu	Leu 160	Leu	Val	Cys	Asn	Tyr 165
Glu	Pro	Pro	Gly	Asn 170	Val	Lys	Gly	Lys	Arg 175	Pro	Tyr	Gln	Glu	Gly 180
Thr	Pro	Cys	Ser	Gln 185	Cys	Pro	Ser	Gly	Tyr 190	His	Cys	Lys	Asn	Ser 195
Leu	Cys	Glu	Pro	Ile 200	Gly	Ser	Pro	Glu	Asp 205	Ala	Gln	Asp	Leu	Pro 210
Tyr	Leu	Val	Thr	Glu 215	Ala	Pro	Ser	Phe	Arg 220	Ala	Thr	Glu	Ala	Ser 225
Asp	Ser	Arg	Lys	Met 230	Gly	Thr	Pro	Ser	Ser 235	Leu	Ala	Thr	Gly	Ile 240
Pro	Ala	Phe	Leu	Val 245	Thr	Glu	Val	Ser	Gly 250	Ser	Leu	Ala	Thr	Lys 255
Ala	Leu	Pro	Ala	Val 260	Glu	Thr	Gln	Ala	Pro 265	Thr	Ser	Leu	Ala	Thr 270
Lys	Asp	Pro	Pro	Ser 275	Met	Ala	Thr	Glu	Ala 280	Pro	Pro	Cys	Val	Thr 285
Thr	Glu	Val	Pro	Ser 290	Ile	Leu	Ala	Ala	His 295	Ser	Leu	Pro	Ser	Leu 300
Asp	Glu	Glu	Pro	Val 305	Thr	Phe	Pro	Lys	Ser 310	Thr	His	Val	Pro	Ile 315
Pro	Lys	Ser	Ala	Asp 320	Lys	Val	Thr	Asp	Lys 325	Thr	Lys	Val	Pro	Ser 330
Arg	Ser	Pro	Glu	Asn 335	Ser	Leu	Asp	Pro	Lys 340	Met	Ser	Leu	Thr	Gly 345
Ala	Arg	Glu	Leu	Leu 350	Pro	His	Ala	Gln	Glu 355	Glu	Ala	Glu	Ala	Glu 360
Ala	Glu	Leu	Pro	Pro 365	Ser	Ser	Glu	Val	Leu 370	Ala	Ser	Val	Phe	Pro 375
Ala	Gln	Asp	Lys	Pro 380	Gly	Glu	Leu	Gln	Ala 385	Thr	Leu	Asp	His	Thr 390
Gly	His	Thr	Ser	Ser 395	Lys	Ser	Leu	Pro	Asn 400	Phe	Pro	Asn	Thr	Ser 405

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Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser
 Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser
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                                      430
 Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly
 Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe
                 455
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<400> 287
 ctcatattgc acaccagtaa ttcg 24
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<400> 288
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<211> 3662
<212> DNA
<213> Homo Sapien
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tggctttgtg tgtgatgatt ttcccaaacc ccagatcacg gttcagccag 1400 aaacacagtc ggcaataaaa ggttccaatt tgagtttcat ctgctcagct 1450 gccagcagca gtgattcccc aatgactttt gcttggaaaa aagacaatga 1500 actactgcat gatgctgaaa tggaaaatta tgcacacctc cgggcccaag 1550 gtggcgaggt gatggagtat accaccatcc ttcggctgcg cgaggtggaa 1600 tttgccagtg aggggaaata tcagtgtgtc atctccaatc actttggttc 1650 atcctactct gtcaaagcca agcttacagt aaatatgctt ccctcattca 1700 ccaagacccc catggatete accateegag etggggeeat ggeaegettg 1750 gagtgtgctg ctgtggggca cccagcccc cagatagcct ggcagaagga 1800 tgggggcaca gacttcccag ctgcacggga gagacgcatg catgtgatgc 1850 ccgaggatga cgtgttcttt atcgtggatg tgaagataga ggacattggg 1900 gtatacaget geacagetea gaacagtgea ggaagtattt eageaaatge 1950 aactetgaet gteetagaaa caecateatt tttgeggeea etgttggaee 2000 gaactgtaac caagggagaa acagccgtcc tacagtgcat tgctggagga 2050 agccctcccc ctaaactgaa ctggaccaaa gatgatagcc cattggtggt 2100 aaccgagagg cacttttttg cagcaggcaa tcagcttctg attattgtgg 2150 actcagatgt cagtgatgct gggaaataca catgtgagat gtctaacacc 2200 cttggcactg agagaggaaa cgtgcgcctc agtgtgatcc ccactccaac 2250 ctgcgactcc cctcagatga cagccccatc gttagacgat gacggatggg 2300 ccactgtggg tgtcgtgatc atagccgtgg tttgctgtgt ggtgggcacg 2350 tcactcgtgt gggtggtcat catataccac acaaggcgga ggaatgaaga 2400 ttgcagcatt accaacacag atgagaccaa cttgccagca gatattccta 2450 gttatttgtc atctcaggga acgttagctg acaggcagga tgggtacgtg 2500 tetteagaaa gtggaageea ceaceagttt gteacatett eaggtgetgg 2550 atttttctta ccacaacatg acagtagtgg gacctgccat attgacaata 2600 gcagtgaagc tgatgtggaa gctgccacag atctgttcct ttgtccgttt 2650 ttgggatcca caggccctat gtatttgaag ggaaatgtgt atggctcaga 2700 tccttttgaa acatatcata caggttgcag tcctgaccca agaacagttt 2750 taatqqacca ctatqaqccc aqttacataa agaaaaagga gtgctaccca 2800 tqttctcatc cttcagaaga atcctgcgaa cggagcttca gtaatatatc 2850 gtggccttca catgtgagga agctacttaa cactagttac tctcacaatg 2900 aaqqacctqq aatqaaaaat ctqtqtctaa acaagtcctc tttagatttt 2950 agtgcaaatc cagagccagc gtcggttgcc tcgagtaatt ctttcatggg 3000 tacctttgga aaagctctca ggagacctca cctagatgcc tattcaagct 3050 ttggacagcc atcagattgt cagccaagag ccttttattt gaaagctcat 3100 tcttccccag acttggactc tgggtcagag gaagatggga aagaaaggac 3150 agattttcag gaagaaatc acatttqtac ctttaaacag actttagaaa 3200 actacaggac tocaaatttt cagtottatg acttggacac atagactgaa 3250 tqaqaccaaa qqaaaaqctt aacatactac ctcaaqtgaa cttttattta 3300 aaagagagag aatcttatgt tttttaaatg gagttatgaa ttttaaaagg 3350 ataaaaatgc tttatttata cagatgaacc aaaattacaa aaagttatga 3400 aaatttttat actgggaatg atgctcatat aagaatacct ttttaaacta 3450 ttttttaact ttqttttatq caaaaaaqta tcttacqtaa attaatgata 3500 taaatcatga ttattttatg tatttttata atgccagatt tctttttatg 3550 gaaaatgagt tactaaagca ttttaaataa tacctgcctt gtaccatttt 3600 ttaaatagaa gttacttcat tatattttgc acattatatt taataaaatg 3650 tgtcaatttg aa 3662

<210> 290

<211> 1059

<212> PRT

<213> Homo Sapien

<400> 290

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Ile Ser Arg Pro Asp Leu Ser His Asn Arg Leu Ser Phe Ile Lys
20 25 30

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Asn	Asn	Asn	Glu	Leu 50	Glu	Thr	Ile	Pro	Asn 55	Leu	Gly	Pro	Val	Ser 60
Ala	Asn	Ile	Thr	Leu 65	Leu	Ser	Leu	Ala	Gly 70	Asn	Arg	Ile	Val	Glu 75
Ile	Leu	Pro	Glu	His 80	Leu	Lys	Glu	Phe	Gln 85	Ser	Leu	Glu	Thr	Leu 90
Asp	Leu	Ser	Ser	Asn 95	Asn	Ile	`Ser	Glu	Leu 100	Gln	Thr	Ala	Phe	Pro 105
Ala	Leu	Gln	Leu	Lys 110	Tyr	Leu	Tyr	Leu	Asn 115	Ser	Asn	Arg	Val	Thr 120
Ser	Met	Glu	Pro	Gly 125	Tyr	Phe	Asp	Asn	Leu 130	Ala	Asn	Thr	Leu	Leu 135
Val	Leu	Lys	Leu	Asn 140	Arg	Asn	Arg	Ile	Ser 145	Ala	Ile	Pro	Pro	Lys 150
Met	Phe	Lys	Leu	Pro	Gln	Leu	Gln	His	Leu	Glu	Leu	Asn	Arg	Asn
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Lys	Ile	Lys	Asn	Val 170	Asp	Gly	Leu	Thr	Phe 175	Gln	Gly	Leu	Gly	Ala 180
Leu	Lys	Ser	Leu	Lys 185	Met	Gln	Arg	Asn	Gly 190	Val	Thr	Lys	Leu	Met 195
Asp	Gly	Ala	Phe	Trp 200	Gly	Leu	Ser	Asn	Met 205	Glu	Ile	Leu	Gln	Leu 210
Asp	His	Asn	Asn	Leu 215	Thr	Glu	Ile	Thr	Lys 220	Gly	Trp	Leu	Tyr	Gly 225
Leu	Leu	Met	Leu	Gln 230	Glu	Leu	His	Leu	Ser 235	Gln	Asn	Ala	Ile	Asn 240
Arg	Ile	Ser	Pro	Asp 245	Ala	Trp	Glu	Phe	Cys 250	Gln	Lys	Leu	Ser	Glu 255
Leu	Asp	Leu	Thr	Phe 260	Asn	His	Leu	Ser	Arg 265	Leu	Asp	Asp	Ser	Ser 270
Phe	Leu	Gly	Leu	Ser 275	Leu	Leu	Asn	Thr	Leu 280	His	Ile	Gly	Asn	Asn 285
Arg	Val	Ser	Tyr	Ile	Ala	Asp	Cys	Ala	Phe	Arg	Gly	Leu	Ser	Ser

				290					295					300
Leu	Lys	Thr	Leu	Asp 305	Leu	Lys	Asn	Asn	Glu 310	Ile	Ser	Trp	Thr	Ile 315
Glu	Asp	Met	Asn	Gly 320	Ala	Phe	Ser	Gly	Leu 325	Asp	Lys	Leu	Arg	Arg 330
Leu	Ile	Leu	Gln	Gly 335	Asn	Arg	Ile	Arg	Ser 340	Ile	Thr	Lys	Lys	Ala 345
Phe	Thr	Gly	Leu	Asp 350	Ala	Leu	Glu	His	Leu 355	Asp	Leu	Ser	Asp	Asn 360
Ala	Ile	Met	Ser	Leu 365	Gln	Gly	Asn	Ala	Phe 370	Ser	Gln	Met	Lys	Lys 375
Leu	Gln	Gln	Leu	His 380	Leu	Asn	Thr	Ser	Ser 385	Leu	Leu	Cys	Asp	Cys 390
Gln	Leu	Lys	Trp	Leu 395	Pro	Gln	Trp	Val	Ala 400	Glu	Asn	Asn	Phe	Gln 405
Ser	Phe	Val	Asn	Ala 410	Ser	Cys	Ala	His	Pro 415	Gln	Leu	Leu	Lys	Gly 420
Arg	Ser	Ile	Phe	Ala 425	Val	Ser	Pro	Asp	Gly 430	Phe	Val	Cys	Asp	Asp 435
Phe	Pro	Lys	Pro	Gln 440	Ile	Thr	Val	Gln	Pro 445	Glu	Thr	Gln	Ser	Ala 450
Ile	Lys	Gly	Ser	Asn 455	Leu	Ser	Phe	Ile	Cys 460	Ser	Ala	Ala	Ser	Ser 465
Ser	Asp	Ser	Pro	Met	Thr	Phe	Ala	Trp	Lys	Lys	Asp	Asn	Glu	Leu
				470					47 5					480
Leu	His	Asp	Ala	Glu 485	Met	Glu	Asn	Tyr	Ala 490	His	Leu	Arg	Ala	Gln 495
Gly	Gly	Glu	Val	Met 500	Glu	Tyr	Thr	Thr	Ile 505	Leu	Arg	Leu	Arg	Glu 510
Val	Glu	Phe	Ala	Ser 515	Glu	Gly	Lys	Tyr	Gln 520	Cys	Val	Ile	Ser	Asn 525
His	Phe	Gly	Ser	Ser 530	Tyr	Ser	Val	Lys	Ala 535	Lys	Leu	Thr	Val	Asn 540
Met	Leu	Pro	Ser	Phe 545	Thr	Lys	Thr	Pro	Met 550	Asp	Leu	Thr	Ile	Arg 555

Ala	Gly	Ala	Met	Ala 560	Arg	Leu	Glu	Cys	Ala 565	Ala	Val	Gly	His	Pro 570
Ala	Pro	Gln	Ile	Ala 575	Trp	Gln	Lys	Asp	Gly 580	Gly	Thr	Asp	Phe	Pro 585
Ala	Ala	Arg	Glu	Arg 590	Arg	Met	His	Val	Met 595	Pro	Glu	Asp	Asp	Val 600
Phe	Phe	Ile	Val	Asp 605	Val	Lys	Ile	Glu	Asp 610	Ile	Gly	Val	Tyr	Ser 615
Cys	Thr	Ala	Gln	Asn 620	Ser	Ala	Gly	Ser	Ile 625	Ser	Ala	Asn	Ala	Thr 630
Leu	Thr	Val	Leu	Glu 635	Thr	Pro	Ser	Phe	Leu 640	Arg	Pro	Leu	Leu	Asp 645
Arg	Thr	Val	Thr	Lys 650	Gly	Glu	Thr	Ala	Val 655	Leu	Gln	Cys	Ile	Ala 660
Gly	Gly	Ser	Pro	Pro 665	Pro	Lys	Leu	Asn	Trp 670	Thr	Lys	Asp	Asp	Ser 675
Pro	Leu	Val	Val	Thr 680	Glu	Arg	His	Phe	Phe 685	Ala	Ala	Gly	Asn	Gln 690
Leu	Leu	Ile	Ile	Val 695	Asp	Ser	Asp	Val	Ser 700	Asp	Ala	Gly	Lys	Tyr 705
Thr	Cys	Glu	Met	Ser 710	Asn	Thr	Leu	Gly	Thr 715	Glu	Arg	Gly	Asn	Val 720
Arg	Leu	Ser	Val	Ile 725	Pro	Thr	Pro	Thr	Cys 730	Asp	Ser	Pro	Gln	Met 735
Thr	Ala	Pro	Ser	Leu 740	Asp	Asp	Asp	Gly	Trp 745	Ala	Thr	Val	Gly	Val 750
Val	Ile	Ile	Ala	Val 755	Val	Cys	Cys	Val	Val 760		Thr	Ser	Leu	Val 765
Trp	Val	Val	Ile	Ile 770		His	Thr	Arg	Arg 775		Asn	Glu	Asp	Cys 780
Ser	Ile	Thr	Asn			Glu	Thr	Asn			Ala	Asp	Ile	Pro 795
<i>a</i>	m	. T	G = c	785		01- -	mb	T 0	790		7 .~~	Gl n	λen	
ser	тyr	ь Leu	. ser	Ser 800		. сту	inr	ьeu	805 805		Arg	GIII	. Asp	810

Tyr Val Ser Ser Glu Ser Gly Ser His His Gln Phe Val Thr Ser 815 820 Ser Gly Ala Gly Phe Phe Leu Pro Gln His Asp Ser Ser Gly Thr Cys His Ile Asp Asn Ser Ser Glu Ala Asp Val Glu Ala Ala Thr Asp Leu Phe Leu Cys Pro Phe Leu Gly Ser Thr Gly Pro Met Tyr 865 Leu Lys Gly Asn Val Tyr Gly Ser Asp Pro Phe Glu Thr Tyr His 880 Thr Gly Cys Ser Pro Asp Pro Arg Thr Val Leu Met Asp His Tyr 895 890 Glu Pro Ser Tyr Ile Lys Lys Glu Cys Tyr Pro Cys Ser His Pro Ser Glu Glu Ser Cys Glu Arg Ser Phe Ser Asn Ile Ser Trp 925 920 Pro Ser His Val Arg Lys Leu Leu Asn Thr Ser Tyr Ser His Asn 935 Glu Gly Pro Gly Met Lys Asn Leu Cys Leu Asn Lys Ser Ser Leu Asp Phe Ser Ala Asn Pro Glu Pro Ala Ser Val Ala Ser Ser Asn 965 970 Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu 980 985 Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg 1005 995 Ala Phe Tyr Leu Lys Ala His Ser Ser Pro Asp Leu Asp Ser Gly 1015 Ser Glu Glu Asp Gly Lys Glu Arg Thr Asp Phe Gln Glu Glu Asn 1030 1025 His Ile Cys Thr Phe Lys Gln Thr Leu Glu Asn Tyr Arg Thr Pro 1045 1050 1040 Asn Phe Gln Ser Tyr Asp Leu Asp Thr

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1055

<212> DNA <213> Homo Sapien

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<212> PRT

<213> Homo Sapien

<400> 292

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Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu 20 25 30

Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln 35 40 45

Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val

Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
65 70 75

Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile 80 85 90

Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
95 100 105

Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe 110 115 120

Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg 125 130 135

Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu 140 145 150

Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser

				155					160					165
Tyr	Ala	Phe	Asn	Arg 170	Ile	Pro	Ser	Leu	Arg 175	Arg	Leu	Asp	Leu	Gly 180
Glu	Leu	Lys	Arg	Leu 185	Ser	Tyr	Ile	Ser	Glu 190	Gly	Ala	Phe	Glu	Gly 195
Leu	Ser	Asn	Leu	Arg 200	Tyr	Leu	Asn	Leu	Ala 205	Met	Cys	Asn	Leu	Arg 210
Glu	Ile	Pro	Asn	Leu 215	Thr	Pro	Leu	Ile	Lys 220	Leu	Asp	Glu	Leu	Asp 225
Leu	Ser	Gly	Asn	His 230	Leu	Ser	Ala	Ile	Arg 235	Pro	Gly	Ser	Phe	Gln 240
Gly	Leu	Met	His	Leu 245	Gln	Lys	Leu	Trp	Met 250	Ile	Gln	Ser	Gln	Ile 255
Gln	Val	Ile	Glu	Arg 260	Asn	Ala	Phe	Asp	Asn 265	Leu	Gln	Ser	Leu	Val 270
Glu	Ile	Asn	Leu	Ala 275	His	Asn	Asn	Leu	Thr 280	Leu	Leu	Pro	His	Asp 285
Leu	Phe	Thr	Pro	Leu 290	His	His	Leu	Glu	Arg 295	Ile	His	Leu	His	His 300
Asn	Pro	Trp	Asn	Cys 305	Asn	Cys	Asp	Ile	Leu 310	Trp	Leu	Ser	Trp	Trp 315
Ile	Lys	Asp	Met	Ala 320	Pro	Ser	Asn	Thr	Ala 325		Cys	Ala	Arg	Cys 330
Asn	Thr	Pro	Pro	Asn 335	Leu	Lys	Gly	Arg	Tyr 340		Gly	Glu	Leu	Asp 345
Gln	Asn	Tyr	Phe	Thr 350		Tyr	Ala	Pro	Val 355		Val	Glu	Pro	Pro 360
Ala	Asp	Leu	Asn	Val 365		Glu	Gly	Met	Ala 370		Glu	Leu	Lys	Cys 375
Arg	Ala	Ser	Thr	Ser 380		Thr	Ser	Val	Ser 385		Ile	Thr	Pro	Asn 390
Gly	Thr	Val	. Met	Thr 395		Gly	Ala	Tyr	Lys 400		Arg	Ile	Ala	Val 405
Leu	Ser	· Asp	Gly	Thr 410		. Asn	Phe	Thr	415		Thr	· Val	. Gln	Asp 420

Thr	Gly	Met	Tyr	Thr 425	Cys	Met	Val	Ser	Asn 430	Ser	Val	Gly	Asn	Thr 435
Thr	Ala	Ser	Ala	Thr 440	Leu	Asn	Val	Thr	Ala 445	Ala	Thr	Thr	Thr	Pro 450
Phe	Ser	Tyr	Phe	Ser 455	Thr	Val	Thr	Val	Glu 460	Thr	Met	Glu	Pro	Ser 465
Gln	Asp	Glu	Ala	Arg 470	Thr	Thr	Asp	Asn	Asn 475	Val	Gly	Pro	Thr	Pro 480
Val	Val	Asp	Trp	Glu 485	Thr	Thr	Asn	Val	Thr 490	Thr	Ser	Leu	Thr	Pro 495
Gln	Ser	Thr	Arg	Ser 500	Thr	Glu	Lys	Thr	Phe 505	Thr	Ile	Pro	Val	Thr 510
Asp	Ile	Asn	Ser	Gly 515	Ile	Pro	Gly	Ile	Asp 520	Glu	Val	Met	Lys	Thr 525
Thr	Lys	Ile	Ile	Ile 530	Gly	Cys	Phe	Val	Ala 535	Ile	Thr	Leu	Met	Ala 540
				545			Tyr		550					555
				560			Thr		565					570
				575			Asp		580					585
				590			Glu		595					600
				605					610					Asn 615
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Ser	Lys	Asp	Asn	. Val 635		. Glu	Thr	Gln	11e 640					

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<211> 4053

<212> DNA

<213> Homo Sapien

<400> 293

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<211> 1119 <212> PRT

<213> Homo Sapien

<400> 294

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Leu Leu Cys Ala Val Leu Gly Arg Ala Gly Arg Ser Asp Ser Gly 20 25 30

Gly Arg Gly Glu Leu Gly Gln Pro Ser Gly Val Ala Ala Glu Arg 35 40 45

Pro Cys Pro Thr Thr Cys Arg Cys Leu Gly Asp Leu Leu Asp Cys 50 55 60

Ser Arg Lys Arg Leu Ala Arg Leu Pro Glu Pro Leu Pro Ser Trp
65 70 75

Val Ala Arg Leu Asp Leu Ser His Asn Arg Leu Ser Phe Ile Lys 80 85 90

Ala Ser Ser Met Ser His Leu Gln Ser Leu Arg Glu Val Lys Leu 95 100 105

Asn Asn Asn Glu Leu Glu Thr Ile Pro Asn Leu Gly Pro Val Ser 110 115 120

Ala Asn Ile Thr Leu Leu Ser Leu Ala Gly Asn Arg Ile Val Glu 125 130 135

Ile Leu Pro Glu His Leu Lys Glu Phe Gln Ser Leu Glu Thr Leu
140 145 150

Asp Leu Ser Ser Asn Asn Ile Ser Glu Leu Gln Thr Ala Phe Pro 155 160 165

Ala Leu Gln Leu Lys Tyr Leu Tyr Leu Asn Ser Asn Arg Val Thr 170 175 180

Ser Met Glu Pro Gly Tyr Phe Asp Asn Leu Ala Asn Thr Leu Leu 185 190 195

Val Leu Lys Leu Asn Arg Asn Arg Ile Ser Ala Ile Pro Pro Lys 200 205 210

Met Phe Lys Leu Pro Gln Leu Gln His Leu Glu Leu Asn Arg Asn

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Lys	Ile	Lys	Asn	Val 230	Asp	Gly	Leu	Thr	Phe 235	Gln	Gly	Leu	Gly	Ala 240
Leu	Lys	Ser	Leu	Lys 245	Met	Gln	Arg	Asn	Gly 250	Val	Thr	Lys	Leu	Met 255
Asp	Gly	Ala	Phe	Trp 260	Gly	Leu	Ser	Asn	Met 265	Glu	Ile	Leu	Gln	Leu 270
Asp	His	Asn	Asn	Leu 275	Thr	Glu	Ile	Thr	Lys 280	Gly	Trp	Leu	Tyr	Gly 285
Leu	Leu	Met	Leu	Gln 290	Glu	Leu	His	Leu	Ser 295	Gln	Asn	Ala	Ile	Asn 300
Arg	Ile	Ser	Pro	Asp 305	Ala	Trp	Glu	Phe	Cys 310	Gln	Lys	Leu	Ser	Glu 315
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<212> PRT

<213> Homo Sapien

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Gly Val Arg Gly Gln Ala Leu Tyr Leu Pro Val His Tyr Gly Phe
35 40 45

His Thr Pro Ala Ser Asp Ile Gln Ile Ile Trp Leu Phe Glu Arg
50 55 60

Pro	His	Thr	Met	Pro 65	Lys	Tyr	Leu	Leu	Gly 70	Ser	Val	Asn	Lys	Ser 75
Val	Val	Pro	Asp	Leu 80	Glu	Tyr	Gln	His	Lys 85	Phe	Thr	Met	Met	Pro 90
Pro	Asn	Ala	Ser	Leu 95	Leu	Ile	Asn	Pro	Leu 100	Gln	Phe	Pro	Asp	Glu 105
Gly	Asn	Tyr	Ile	Val 110	Lys	Val	Asn	Ile	Gln 115	Gly	Asn	Gly	Thr	Leu 120
Ser	Ala	Ser	Gln	Lys 125	Ile	Gln	Val	Thr	Val 130	Asp	Asp	Pro	Val	Thr 135
Lys	Pro	Val	Val	Gln 140	Ile	His	Pro	Pro	Ser 145	Gly	Ala	Val	Glu	Tyr 150
Val	Gly	Asn	Met	Thr 155	Leu	Thr	Cys	His	Val 160	Glu	Gly	Gly	Thr	Arg 165
Leu	Ala	Tyr	Gln	Trp 170	Leu	Lys	Asn	Gly	Arg 175	Pro	Val	His	Thr	Ser 180
Ser	Thr	Tyr	Ser	Phe 185	Ser	Pro	Gln	Asn	Asn 190	Thr	Leu	His	Ile	Ala 195
Pro	Val	Thr	Lys	Glu 200	Asp	Ile	Gly	Asn	Tyr 205	Ser	Cys	Leu	Val	Arg 210
Asn	Pro	Val	Ser	Glu 215	Met	Glu	Ser	Asp	Ile 220	Ile	Met	Pro	Ile	Ile 225
Tyr	Tyr	Gly	Pro	Tyr 230	Gly	Leu	Gln	Val	Asn 235	Ser	Asp	Lys	Gly	Leu 240
Lys	Val	Gly	Glu	Val 245	Phe	Thr	Val	Asp	Leu 250	Gly	Glu	Ala	Ile	Leu 255
Phe	Asp	Cys	Ser	Ala 260	Asp	Ser	His	Pro	Pro 265	Asn	Thr	Tyr	Ser	Trp 270
Ile	Arg	Arg	Thr	Asp 275	Asn	Thr	Thr	Tyr	Ile 280	Ile	Lys	His	Gly	Pro 285
Arg	Leu	Glu	Val	Ala 290		Glu	Lys	Val	Ala 295	Gln	Lys	Thr	Met	Asp 300
Tyr	Val	Cys	Cys	Ala 305		Asn	Asn	Ile	Thr 310	Gly	Arg	Gln	Asp	Glu 315
Thr	His	Phe	Thr	Val	Ile	Ile	Thr	Ser	. Val	Gly	Leu	Glu	Lys	Leu

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Ala	Gln	Lys	Gly	Lys 335	Ser	Leu	Ser	Pro	Leu 340	Ala	Ser	Ile	Thr	Gly 345
Ile	Ser	Leu	Phe	Leu 350	Ile	Ile	Ser	Met	Cys 355	Leu	Leu	Phe	Leu	Trp 360
Lys	Lys	Tyr	Gln	Pro 365	Tyr	Lys	Val	Ile	Lys 370	Gln	Lys	Leu	Glu	Gly 375
Arg	Pro	Glu	Thr	Glu 380	Tyr	Arg	Lys	Ala	Gln 385	Thr	Phe	Ser	Gly	His 390
Glu	Asp	Ala	Leu	Asp 395	Asp	Phe	Gly	Ile	Tyr 400	Glu	Phe	Val	Ala	Phe 405
Pro	Asp	Val	Ser	Gly 410	Val	Ser	Arg	Ile	Pro 415	Ser	Arg	Ser	Val	Pro 420
Ala	Ser	Asp	Cys	Val 425	Ser	Gly	Gln	Asp	Leu 430	His	Ser	Thr	Val	Tyr 435
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35 40 45

Asp Trp Met Ile Glu Phe Tyr Ala Pro Trp Cys Pro Ala Cys Gln 50 55 60

Asn Leu Gln Pro Glu Trp Glu Ser Phe Ala Glu Trp Gly Glu Asp
65 70 75

Leu Glu Val Asn Ile Ala Lys Val Asp Val Thr Glu Gln Pro Gly 80 85 90

Leu Ser Gly Arg Phe Ile Ile Thr Ala Leu Pro Thr Ile Tyr His
95 100 105

Cys Lys Asp Gly Glu Phe Arg Arg Tyr Gln Gly Pro Arg Thr Lys 110 115 120

Lys Asp Phe Ile Asn Phe Ile Ser Asp Lys Glu Trp Lys Ser Ile 125 130 135

Glu Pro Val Ser Ser Trp Phe Gly Pro Gly Ser Val Leu Met Ser 140 145 150

Ser Met Ser Ala Leu Phe Gln Leu Ser Met Trp Ile Arg Thr Cys 155 160 165

His Asn Tyr Phe Ile Glu Asp Leu Gly Leu Pro Val Trp Gly Ser 170 175 180

Tyr Thr Val Phe Ala Leu Ala Thr Leu Phe Ser Gly Leu Leu Leu 185 190 195

Gly Leu Cys Met Ile Phe Val Ala Asp Cys Leu Cys Pro Ser Lys 200 205 210

Arg Arg Pro Gln Pro Tyr Pro Tyr Pro Ser Lys Lys Leu Leu

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Ala	Asp	Glu	Glu	Asp 245	Val	Ser	Glu	Glu	Glu 250	Ala	Glu	Ser	Lys	Glu 255
Gly	Thr	Asn	Lys	Asp 260	Phe	Pro	Gln	Asn	Ala 265	Ile	Arg	Gln	Arg	Ser 270
Leu	Gly	Pro	Ser	Leu 275	Ala	Thr	Asp	Lys	Ser 280					
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35 40 45

Glu Tyr Ile Leu Val Glu Glu Ala Lys Leu Ser Lys Ile Lys Ser
50 55 60

Trp Ala Asn Lys Met Glu Ala Leu Thr Ser Lys Ser Ala Ala Asp
65 70 75

Ala Glu Gly Tyr Leu Ala His Pro Val Asn Ala Tyr Lys Leu Val

Lys Arg Leu Asn Thr Asp Trp Pro Ala Leu Glu Asp Leu Val Leu 95 100 105

Gln Asp Ser Ala Ala Gly Phe Ile Ala Asn Leu Ser Val Gln Arg

Gln Phe Phe Pro Thr Asp Glu Asp Glu Ile Gly Ala Ala Lys Ala 125 130 135

Leu Met Arg Leu Gln Asp Thr Tyr Arg Leu Asp Pro Gly Thr Ile 140 145 150

Ser Arg Gly Glu Leu Pro Gly Thr Lys Tyr Gln Ala Met Leu Ser 155 160 165

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185 190 195

Leu Asp Ala Gly Glu Glu Ala Thr Thr Thr Lys Ser Gln Val Leu 200 205 210

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<211> 772

<212> PRT

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<400> 339

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Val Gly Glu Arg Gly Gly Pro Gln Asn Pro Asp Ser Arg Ala Arg
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Leu Asp Gln Ser Asp Glu Asp Phe Lys Pro Arg Ile Val Pro Tyr
65 70 75

Tyr Arg Asp Pro Asn Lys Pro Tyr Lys Lys Val Leu Arg Thr Arg 80 85 90

Tyr Ile Gln Thr Glu Leu Gly Ser Arg Glu Arg Leu Leu Val Ala

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Asn	Arg	Thr	Val	Ala 125	His	His	Phe	Pro	Arg 130	Leu	Leu	Tyr	Phe	Thr 135
Gly	Gln	Arg	Gly	Ala 140	Arg	Ala	Pro	Ala	Gly 145	Met	Gln	Val	Val	Ser 150
His	Gly	Asp	Glu	Arg 155	Pro	Ala	Trp	Leu	Met 160	Ser	Glu	Thr	Leu	Arg 165
His	Leu	His	Thr	His 170	Phe	Gly	Ala	Asp	Tyr 175	Asp	Trp	Phe	Phe	Ile 180
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Ala	Gly	His	Leu	Ser 200	Ile	Asn	Gln	Asp	Leu 205	Tyr	Leu	Gly	Arg	Ala 210
Glu	Glu	Phe	Ile	Gly 215	Ala	Gly	Glu	Gln	Ala 220	Arg	Tyr	Cys	His	Gly 225
Gly	Phe	Gly	Tyr	Leu 230	Leu	Ser	Arg	Ser	Leu 235	Leu	Leu	Arg	Leu	Arg 240
Pro	His	Leu	Asp	Gly 245	Cys	Arg	Gly	Asp	Ile 250	Leu	Ser	Ala	Arg	Pro 255
Asp	Glu	Trp	Leu	Gly 260	Arg	Cys	Leu	Ile	Asp 265	Ser	Leu	Gly	Val	Gly 270
Суѕ	Val	Ser	Gln	His 275	Gln	Gly	Gln	Gln	Tyr 280	Arg	Ser	Phe	Glu	Leu 285
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Ser	Ala	Phe	Ala	Val 305	His	Pro	Val	Ser	Glu 310	Gly	Thr	Leu	Met	Tyr 315
Arg	Leu	His	Lys	Arg 320	Phe	Ser	Ala	Leu	Glu 325		Glu	Arg	Ala	Туr 330
Ser	Glu	Ile	Glu	Gln 335		Gln	Ala	Gln	Ile 340		Asn	Leu	Thr	Val 345
Leu	Thr	Pro	Glu	Gly 350		Ala	Gly	Leu	Ser 355		Pro	Val	Gly	Leu 360

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Pro	Lys	Cys	Pro	Leu 395	Gln	Gly	Ala	Ser	Arg 400	Ala	Asp	Val	Gly	Asp 405
Ala	Leu	Glu	Thr	Ala 410	Leu	Glu	Gln	Leu	Asn 415	Arg	Arg	Tyr	Gln	Pro 420
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Phe	Asp	Pro	Ala	Arg 440	Gly	Met	Glu	Tyr	Thr 445	Leu	Asp	Leu	Leu	Leu 450
Glu	Cys	Val	Thr	Gln 455	Arg	Gly	His	Arg	Arg 460	Ala	Leu	Ala	Arg	Arg 465
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Pro	Tyr	Val	Thr	Glu 485	Ala	Thr	Arg	Val	Gln 490	Leu	Val	Leu	Pro	Leu 495
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Val	Asp	Thr	Leu	Phe 590	Phe	Leu	Thr	Thr	Val 595	Trp	Thr	Arg	Pro	Gly 600
Pro	Glu	Val	Leu	Asn 605	Arg	Cys	Arg	Met	Asn 610	Ala	Ile	Ser	Gly	Trp 615
Gln	Ala	Phe	Phe	Pro 620	Val	His	Phe	Gln	Glu 625	Phe	Asn	Pro	Ala	Leu 630

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Asp	Val	Phe	Leu	Arg 710	Phe	Ser	Gly	Leu	His 715	Leu	Phe	Arg	Ala	Val 720
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Arg	Leu	Ser	Glu	Glu 740	Leu	Tyr	His	Arg	Cys 745	Arg	Leu	Ser	Asn	Leu 750
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<213> Homo Sapien

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catcatcacc tacaagctcc taacaaagaa gatatcttga aaatttcaga 250
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Gly	His	Gly	Asn	Arg 35	Met	His	His	His	Glu 40	His	His	His	Leu	Gln 45
Ala	Pro	Asn	Lys	Glu 50	Asp	Ile	Leu	Lys	Ile 55	Ser	Glu	Asp	Glu	Arg 60
Met	Glu	Leu	Ser	Lys 65	Ser	Phe	Arg	Val	Tyr 70	Cys	Ile	Ile	Leu	Val 75
Lys	Pro	Lys	Asp	Val 80	Ser	Leu	Trp	Ala	Ala 85	Val	Lys	Glu	Thr	Trp 90
Thr	Lys	His	Cys	Asp 95	Lys	Ala	Glu	Phe	Phe 100	Ser	Ser	Glu	Asn	Val 105
Lys	Val	Phe	Glu	Ser 110	Ile	Asn	Met	Asp	Thr 115	Asn	Asp	Met	Trp	Leu 120
Met	Met	Arg	Lys	Ala 125	Tyr	Lys	Tyr	Ala	Phe 130	Asp	Lys	Tyr	Arg	Asp 135
Gln	Tyr	Asn	Trp	Phe 140	Phe	Leu	Ala	Arg	Pro 145	Thr	Thr	Phe	Ala	Ile 150
Ile	Glu	Asn	Leu	Lys 155	Tyr	Phe	Leu	Leu	Lys 160	Lys	Asp	Pro	Ser	Gln 165
Pro	Phe	Tyr	Leu	Gly 170	His	Thr	Ile	Lys	Ser 175	Gly	Asp	Leu	Glu	Tyr 180
Val	Gly	Met	Glu	Gly 185	Gly	Ile	Val	Leu	Ser 190	Val	Glu	Ser	Met	Lys 195
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Cys	Leu	Lys	Tyr	Ala 230	Gly	Val	Phe	Ala	Glu 235	Asn	Ala	Glu	Asp	Ala 240
Asp	Gly	Lys	Asp	Val 245	Phe	Asn	Thr	Lys	Ser 250	Val	Gly	Leu	Ser	11e 255
Lvs	G111	Ala	Met	Thr	Tvr	His	Pro	Asn	Gln	Val	Val	Glu	Glv	Cvs

270

260 265 Cys Ser Asp Met Ala Val Thr Phe Asn Gly Leu Thr Pro Asn Gln 280 275 Met His Val Met Met Tyr Gly Val Tyr Arg Leu Arg Ala Phe Gly His Ile Phe Asn Asp Ala Leu Val Phe Leu Pro Pro Asn Gly Ser 305 Asp Asn Asp <210> 342 <211> 23 <212> DNA <213> Artificial Sequence <223> Synthetic Oligonucleotide Probe <400> 342 tececaagee gttetagaeg egg 23 <210> 343 <211> 18 <212> DNA <213> Artificial Sequence <223> Synthetic Oligonucleotide Probe <400> 343 ctggttcttc cttgcacg 18 <210> 344 <211> 28 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe gcccaaatgc cctaaggcgg tatacccc 28 <210> 345 <211> 50 <212> DNA <213> Artificial Sequence <220>

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<212> PRT

<213> Homo Sapien

<400> 377

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Cys Phe Ser Ser Gln Met Phe Leu Trp Thr Val Ala Gly Ile Pro $20 \\ 25 \\ 30$

Ile Leu Phe Leu Ser Ala Cys Phe Ile Thr Arg Cys Val Val Thr 35 40 45

Phe Arg Ile Phe Gln Thr Cys Asp Glu Lys Lys Phe Gln Leu Pro 50 55 60

Glu Asn Phe Thr Glu Leu Ser Cys Tyr Asn Tyr Gly Ser Gly Ser
65 70 75

Val Lys Asn Cys Cys Pro Leu Asn Trp Glu Tyr Phe Gln Ser Ser 80 85 90

Cys Tyr Phe Phe Ser Thr Asp Thr Ile Ser Trp Ala Leu Ser Leu
95 100 105

Lys Asn Cys Ser Ala Met Gly Ala His Leu Val Val Ile Asn Ser 110 115 120

Gln Glu Glu Gln Glu Phe Leu Ser Tyr Lys Lys Pro Lys Met Arg 125 130 135

Glu Phe Phe Ile Gly Leu Ser Asp Gln Val Val Glu Gly Gln Trp 140 145 150

Gln Trp Val Asp Gly Thr Pro Leu Thr Lys Ser Leu Ser Phe Trp
155 160 165

Asp Val Gly Glu Pro Asn Asn Ile Ala Thr Leu Glu Asp Cys Ala 170 175 180

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Phe Glu Ser Val Glu Leu Ser Cys Ile Ile Thr Asp Ser Gln Thr
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Arg Ala Glu Ile Leu Gly Lys Thr Ser Leu Lys Ile Trp Asn Val 95 100 105

Thr Arg Arg Asp Ser Ala Leu Tyr Arg Cys Glu Val Val Ala Arg 110 115 120

Asn Asp Arg Lys Glu Ile Asp Glu Ile Val Ile Glu Leu Thr Val 125 130 135

Gln Val Lys Pro Val Thr Pro Val Cys Arg Val Pro Lys Ala Val 140 145 150

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